STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 177511

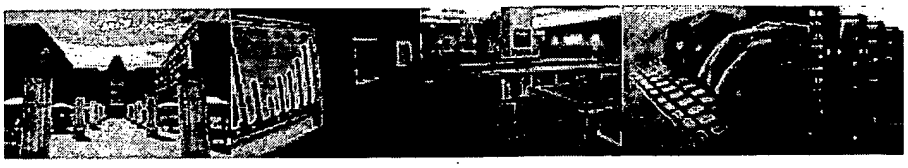
TO: Everett White Location: 5d24 / 5c18 Tuesday, January 31, 2006 Art Unit: 1623 Phone: 571-272-0660 Serial Number: 10 / 668290	From: Jan Delaval Location: Biotech-Chem Library Remsen 1a51 Phone: 571-272-2504 jan.delaval@uspto.gov

Search Notes

67057

177511

Scientific & Technical Information Center



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( ) TC 2900 ( ) TC 3600 ( ) TC 3700 ( ) Law Lib ( ) Other

Your Contact Information:

* Email Address: Everett.White@uspto.gov
(e.g., Susan.Smith@uspto.gov)

Mailbox No.:

RECEIVED JAN 25 2006 SUBMITTED BY (STIC)

*** Case serial number:** 10/668,290
If not related to a patent application, please enter NA here.

Class / Subclass(es) 514/23, 25, 42

Earliest Priority Filing Date: June 16, 1998

Format preferred for results:
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Provide detailed information on your search topic:

- In your own words, describe in detail the concepts or subjects you want us to s
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  Include the elected species or structures, keywords, synonyms, acronyms, and
- For Sequence Searches Only
  Include all pertinent information (parent, child, divisional, or issued patent numb
  serial number.
- For Foreign Patent Family Searches Only
  Include the country name and patent number.
- Provide examples or give us relevant citations, authors, etc., if known.
- FAX or send the **abstract, pertinent claims** (not all of the claims), **drawings,** c
  EIC or branch library.

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1-31-06

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STRUCTURE FILE UPDATES:   29 JAN 2006  HIGHEST RN 872967-60-7
DICTIONARY FILE UPDATES:  29 JAN 2006  HIGHEST RN 872967-60-7

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*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

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predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> d ide can tot l19

L19  ANSWER 1 OF 11  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   252762-90-6  REGISTRY
ED   Entered STN:  12 Jan 2000
CN   D-Glucose, 2-deoxy-2-[[(3R)-1-oxo-3-[(1-oxo-9-
     phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen
     sulfate), monosodium salt (9CI)  (CA INDEX NAME)
FS   STEREOSEARCH
MF   C50 H79 N O12 S . Na
SR   CA
LC   STN Files:   CA, CAPLUS, USPATFULL
CRN  (111250-71-6)

Absolute stereochemistry.
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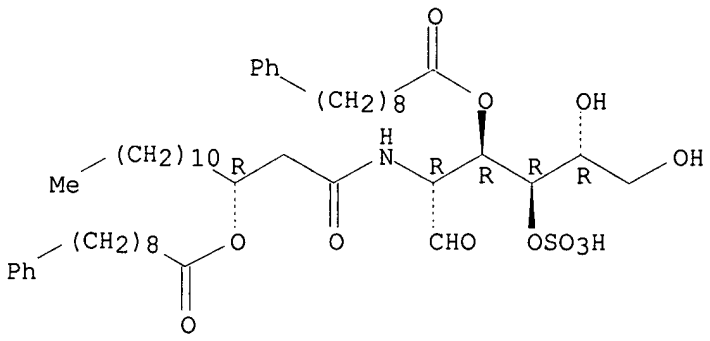


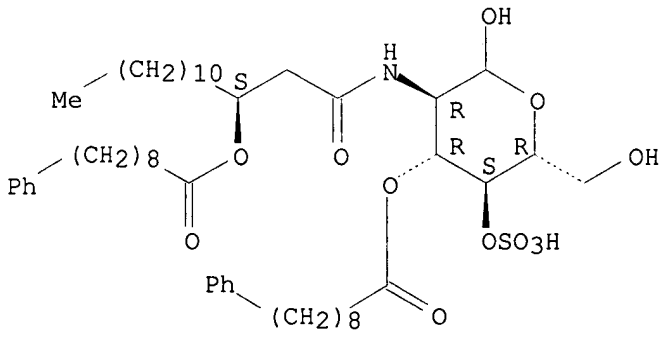
● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:54873

L19 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 249299-67-0 REGISTRY
ED Entered STN: 29 Nov 1999
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S . Na**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (249299-66-9)

Absolute stereochemistry.



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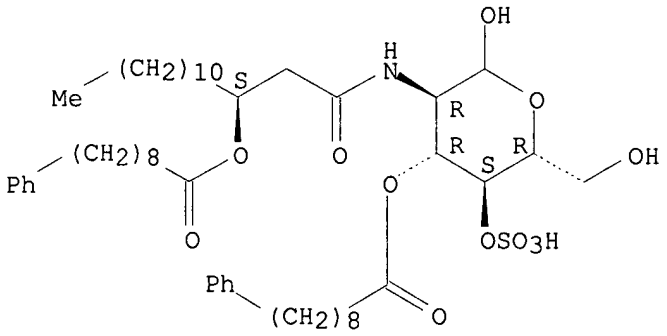
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:327570

L19 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 249299-66-9 REGISTRY
ED Entered STN: 29 Nov 1999
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S**
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



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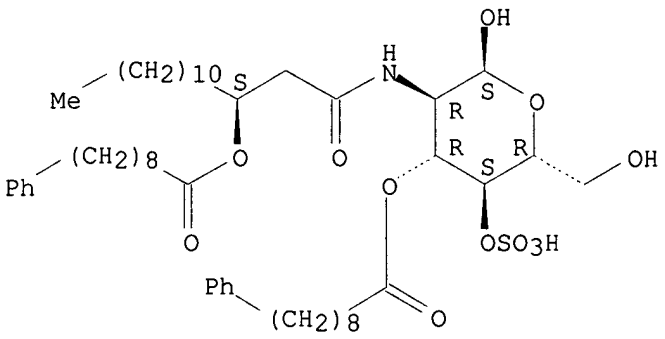
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:327570

L19 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 223445-11-2 REGISTRY
ED Entered STN: 21 May 1999
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S . Na**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (223445-10-1)

Absolute stereochemistry.



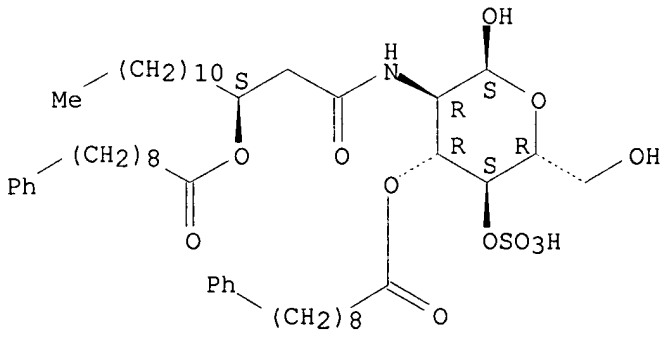
● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:316629

L19 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 223445-10-1 REGISTRY
ED Entered STN: 21 May 1999
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S**
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

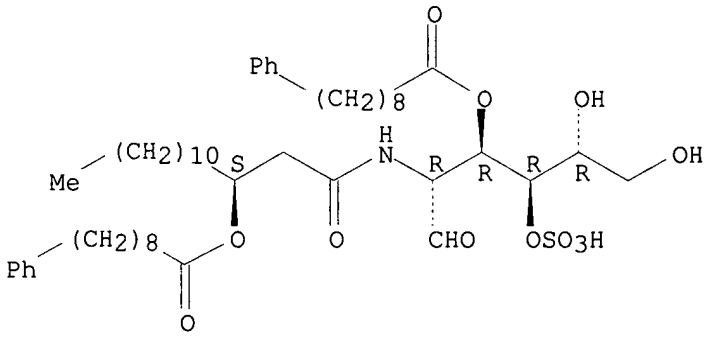
REFERENCE 1: 130:316629

L19 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 152646-96-3 REGISTRY
ED Entered STN: 01 Feb 1994
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (S)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, compd. with (S)-2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-D-glucose 3-benzenenonanoate 4-(hydrogen sulfate) (1:1) (9CI)
FS STEREOSEARCH
MF **C50 H79 N O12 S . C4 H11 N O3**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

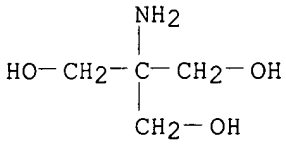
CRN 111250-67-0
CMF C50 H79 N O12 S

Absolute stereochemistry.



CM 2

CRN 77-86-1
CMF C4 H11 N O3



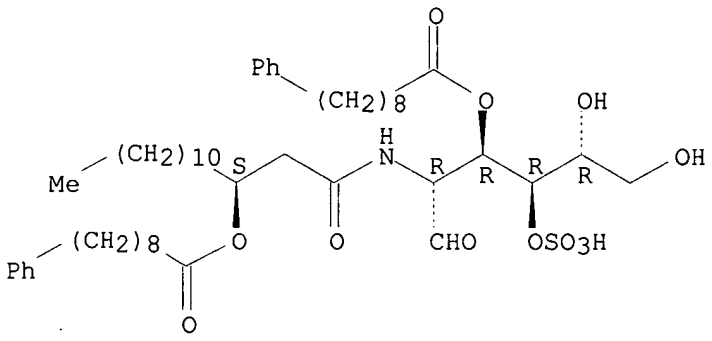
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:116838

L19 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN **152646-95-2** REGISTRY
ED Entered STN: 01 Feb 1994
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen

sulfate), monosodium salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt, (S)-
OTHER NAMES:
CN ONO 4007
FS STEREOSEARCH
DR 191088-79-6
MF **C50 H79 N O12 S . Na**
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, IMSDRUGNEWS, IMSRESEARCH, IPA, PHAR, PROMT, PROUSDDR, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
CRN (111250-67-0)

Absolute stereochemistry.



● Na

31 REFERENCES IN FILE CA (1907 TO DATE)
31 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:348472

REFERENCE 2: 140:70476

REFERENCE 3: 139:347

REFERENCE 4: 138:395606

REFERENCE 5: 138:33002

REFERENCE 6: 137:257322

REFERENCE 7: 137:119694

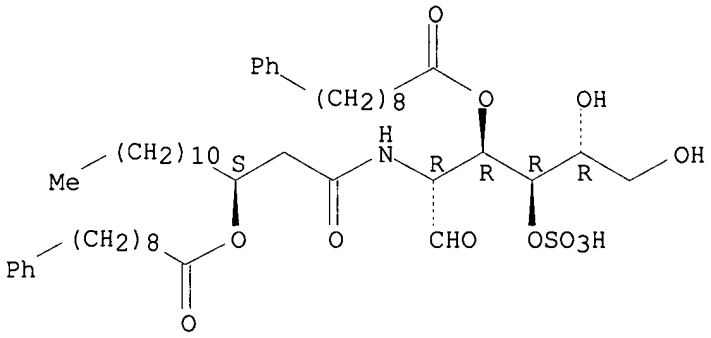
REFERENCE 8: 136:379583

REFERENCE 9: 136:363486

REFERENCE 10: 133:294547

L19 ANSWER 8 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 152646-93-0 REGISTRY
ED Entered STN: 01 Feb 1994
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium salt (2:1), (S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S . 1/2 Ca**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (111250-67-0)

Absolute stereochemistry.



●1/2 Ca

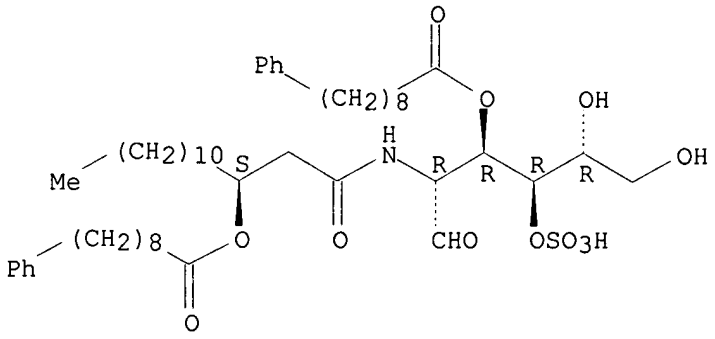
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:116838

L19 ANSWER 9 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 152646-92-9 REGISTRY
ED Entered STN: 01 Feb 1994
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium magnesium sodium salt, (S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S . x Ca . x Mg . x Na**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (111250-67-0)

Absolute stereochemistry.

PAGE 1-A



●x Ca

●x Mg

PAGE 2-A

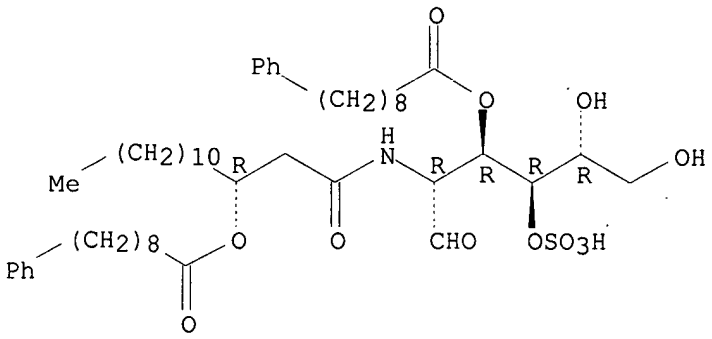
●x Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:116838

L19 ANSWER 10 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN 111250-71-6 REGISTRY
ED Entered STN: 14 Nov 1987
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C50 H79 N O12 S**
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



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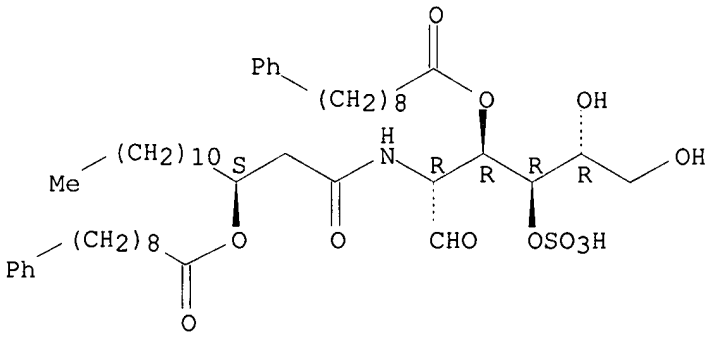
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:237216

L19 ANSWER 11 OF 11 REGISTRY COPYRIGHT 2006 ACS on STN
RN **111250-67-0** REGISTRY
ED Entered STN: 14 Nov 1987
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (S)-
FS STEREOSEARCH
MF **C50 H79 N O12 S**
CI COM
SR CA
LC STN Files: CA, CAPLUS, PROUSDDR, SYNTHLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:54873

REFERENCE 2: 130:332870

REFERENCE 3: 107:237216

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               SET COST OFF

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L2             2 S E3
               E FUKUSHIMA D/AU
               E SHIBAYAMA/AU
               E SHIBAYAMA S/AU
L3            47 S E3,E17
               E TADA/AU
L4             3 S E3
               E TADA H/AU
L5           100 S E3,E4,E20
               E DAIKICHI/AU
               E SHIRO/AU
L6             7 S E65,E75
               E HIDEAKI/AU
L7             3 S E3
               E FUKUSHIMA N/AU
L8            12 S E5
               E SHIBAYAMA N/AU
L9             1 S E4
               E ONO/PA,CS
L10         1703 S E3,E4
               E FUKUSHIMA D/AU
L11           93 S E3-E6
               SEL RN L1

     FILE 'REGISTRY' ENTERED AT 08:33:37 ON 31 JAN 2006
L12          116 S E1-E116
L13           45 S L12 AND 46.150.18/RID AND 2-3/NR
L14           38 S L13 AND (N AND S)/ELS
L15           15 S L14 AND 50/C
L16            6 S L15 AND 12/O
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L17            3 S E117-E119
               E C50H79NO12/MF
L18           11 S E4-E8 AND 46.150.18/RID AND 2-3/NR
L19           11 S L17,L18

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L21           34 S L19
L22           30 S ONO4007 OR ONO 4007
L23           37 S L21,L22
L24           25 S L23 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)
L25            9 S L1-L11 AND L23
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L26           9 S L24 AND L25
L27           9 S L26 AND ONO?/PA,CS
L28           9 S L25-L27
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L30           1 S L24 AND (HIV OR HUMAN(S)IMMUNODEFICIEN?(S)(VIRUS OR SYNDROM?)
L31           1 S L24 AND (AIDS OR ACQUIR?(S)IMMUNODEFICIEN?(S)(VIRUS OR SYNDRO
                E AIDS/CT
L32           1 S L24 AND E4-E20
                E E4+ALL
L33           1 S L24 AND E8+OLD,NT,PFT,RT
L34           0 S L24 AND E25
                E E23+ALL
L35           0 S L24 AND E10
                E HIV/CT
L36           0 S L24 AND E3,E7,E8,E12
                E E3+ALL
                E E2+ALL
L37           1 S L24 AND E5+OLD,NT,PFT,RT
L38           1 S L30-L37
L39           1 S L28,L29 AND L38
L40          24 S L28,L29 NOT L39
L41           0 S L40 AND (?VIRUS? OR ?VIRUC? OR ?VIRAL?)

     FILE 'USPATFULL, USPAT2' ENTERED AT 08:45:27 ON 31 JAN 2006
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L43           4 S L22
L44           8 S L42,L43 AND (PY<=1998 OR PRY<=1998 OR AY<=1998)

     FILE 'REGISTRY' ENTERED AT 08:46:13 ON 31 JAN 2006

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 08:46:24 ON 31 JAN 2006
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FILE COVERS 1907 - 31 Jan 2006  VOL 144 ISS 6
FILE LAST UPDATED: 30 Jan 2006  (20060130/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d l29 all hitstr

L29  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   1999:265903  HCAPLUS
DN   130:316629
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ED Entered STN: 30 Apr 1999
TI Leishmaniasis remedy containing glucopyranose derivative as the active ingredient
IN Nonaka, Shigeo
PA University of the Ryukyu, Japan
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A61K0031-70
ICS C07H0013-04
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAN.CNT 1

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PRAI	JP 1997-277656	A	19971009	<--		
	WO 1998-JP4537	W	19981008	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9918975	ICM	A61K0031-70	
	ICS	C07H0013-04	
	IPCI	A61K0031-70 [ICM,6]; C07H0013-04 [ICS,6]	
	ECLA	C07H013/04C	<--
JP 2000063396	IPCI	C07H0015-12 [ICM,7]; A61K0031-70 [ICS,7]	<--
AU 9894582	IPCI	A61K0031-70 [ICM,6]; C07H0013-04 [ICS,6]	<--
EP 1031351	IPCI	A61K0031-70 [ICM,6]; C07H0013-04 [ICI,6]	
	ECLA	C07H013/04C	<--
BR 9814815	IPCI	A61K0031-70 [ICM,7]	<--
AT 286401	IPCI	A61K0031-70 [ICM,7]; C07H0013-06 [ICS,7]; C07H0013-04 [ICS,7]	<--
US 6444648 not ODP	IPCI	A01N0043-04 [ICM,7]; A01N0061-00 [ICS,7]; A01N0043-00 [ICS,7]	
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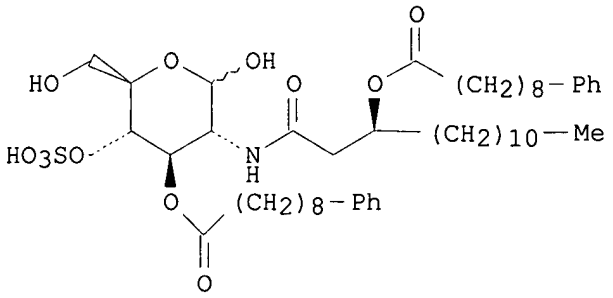
	ECLA	C07H013/04C	<--

GI



I

AB The invention relates to a preventive and/or remedy for leishmaniasis, containing 2-deoxy-2-[(3S)-(9-phenylnonanoyloxy) -tetradecanoyl]amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-α-D-glucopyranose represented by formula (I) or a nontoxic salt thereof as the active ingredient. The above compound and its salt are efficacious in preventing and/or remedying leishmaniasis and are highly safe.

ST leishmaniasis glucopyranose deriv injection

IT Drug delivery systems
Drug delivery systems
(injections, freeze-dried; leishmaniasis remedy containing glucopyranose derivative as active ingredient)

IT Leishmania
(leishmaniasis from; leishmaniasis remedy containing glucopyranose derivative
as active ingredient)

IT **223445-10-1 223445-11-2**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(leishmaniasis remedy containing glucopyranose derivative as active ingredient)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

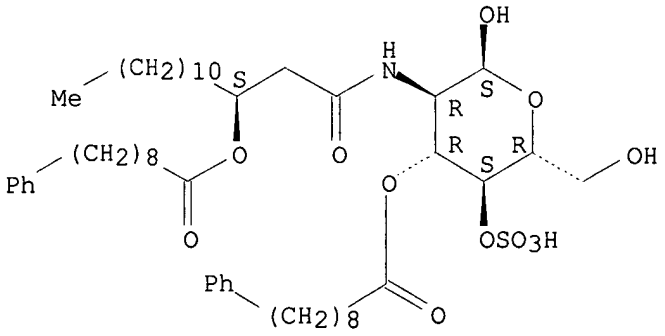
(1) Hattori, Y; European Journal of Pharmacology Molecular Pharmacology 1995, V291, P83 HCAPLUS
(2) Kobayashi, M; Experimental Hematology 1994, V22, P454 HCAPLUS
(3) Matsumoto, N; Immunopharmacology 1997, V36(1), P69 HCAPLUS
(4) Tandon, J; Journal of Natural Products 1991, V54(4), P1102 HCAPLUS

IT **223445-10-1 223445-11-2**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(leishmaniasis remedy containing glucopyranose derivative as active ingredient)

RN 223445-10-1 HCAPLUS

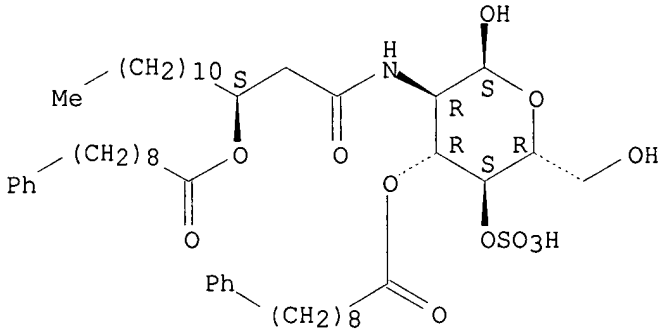
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223445-11-2 HCAPLUS
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

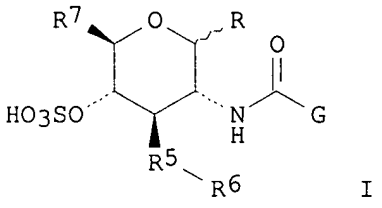
=> d 140 bib abs hitstr retable tot

L40 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:722895 HCAPLUS
DN 131:327570
TI Immunosuppressant containing glucopyranose derivative as active ingredient
IN Soma, Gen-ichiro; Omawari, Nagashige
PA **Ono Pharmaceutical Co., Ltd., Japan**
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9956744	A1	19991111	WO 1999-JP2362	19990506 <--

W: JP, KR, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE
EP 1088553 A1 20010404 EP 1999-918318 19990506 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
US 6495678 B1 20021217 US 2000-674808 20001106 <--
PRAI JP 1998-137402 A 19980506 <--
WO 1999-JP2362 W 19990506
OS MARPAT 131:327570
GI



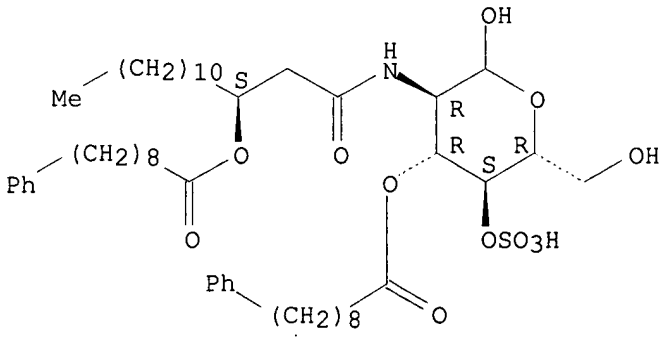
I

AB Glucopyranose derivs. represented by formula (I) and an immunosuppressant containing a nontoxic salt of any of the derivs. as the active ingredient. In formula (I), R is H, OH, etc.; G is -CH2CH(R1-R2)(R3-R4) (R1 is a single bond or OCO-alkyl; R2 and R4 each is H, Ph optionally substituted by, e.g., halogeno, etc.; and R3 is alkylene), etc.; R5 is OCO-alkyl and R6 is H, Ph optionally substituted by, e.g., halogeno, etc., or R5-R6 is OCO-Z-(dialkoxyphenyl); and R7 is H, CH2OH, etc. The derivs. and nontoxic salts thereof have an immunosuppressive activity and are useful for the prevention and/or remedy of diseases caused by exasperated dysimmunization (allergic diseases and autoimmune diseases). Tablets were formulated containing I 500, calcium CM-cellulose 200, magnesium stearate 100 mg and microcryst. cellulose 9.2 g.

IT **249299-66-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunosuppressant containing glucopyranose derivative as active ingredient)

RN 249299-66-9 HCAPLUS
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

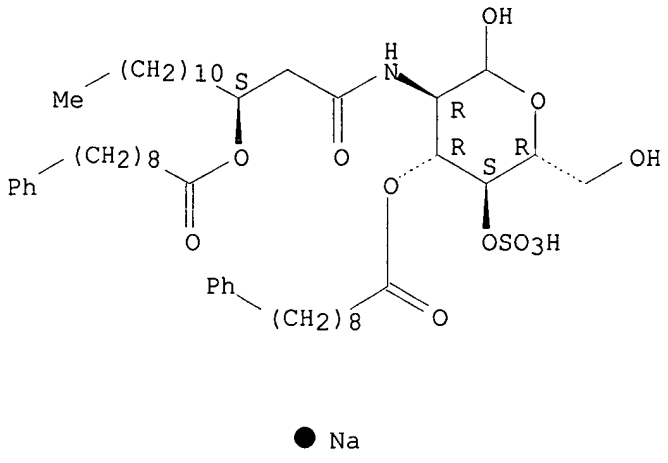
Absolute stereochemistry.



IT **249299-67-0**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunosuppressant containing glucopyranose derivative as active ingredient)
RN 249299-67-0 HCAPLUS
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Ono Pharmaceutical Co L				EP 226381 A2	HCAPLUS
Ono Pharmaceutical Co L				EP 288888 A2	HCAPLUS
Ono Pharmaceutical Co L				US 4925929 A	HCAPLUS
Ono Pharmaceutical Co L				US 4925929 A	HCAPLUS
Ono Pharmaceutical Co L	1988			JP 63-179885 A	HCAPLUS
Ono Pharmaceutical Co L	1989			JP 64-52793 A	
Ono Pharmaceutical Co L	1999			WO 9918975 A	HCAPLUS

L40 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:265903 HCAPLUS
DN 130:316629
TI Leishmaniasis remedy containing glucopyranose derivative as the active ingredient
IN Nonaka, Shigeo
PA University of the Ryukyu, Japan
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9918975	A1	19990422	WO 1998-JP4537	19981008 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	JP 2000063396	A2	20000229	JP 1997-277656	19971009 <--
	JP 3057226	B2	20000626		
	AU 9894582	A1	19990503	AU 1998-94582	19981008 <--
	EP 1031351	A1	20000830	EP 1998-947778	19981008 <--
	EP 1031351	B1	20050105		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9814815	A	20001003	BR 1998-14815	19981008 <--
	AT 286401	E	20050115	AT 1998-947778	19981008 <--
	US 6444648	B1	20020903	US 2000-529333	20000717 <--
PRAI	JP 1997-277656	A	19971009	<--	
	WO 1998-JP4537	W	19981008	<--	

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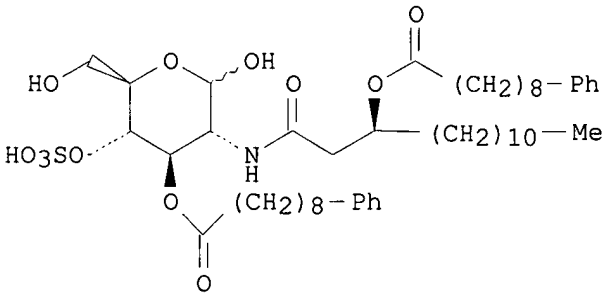


I

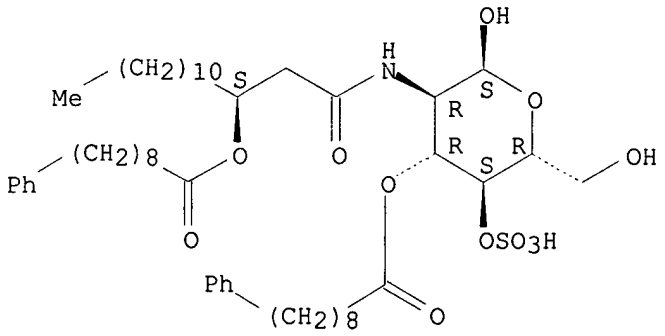
AB The invention relates to a preventive and/or remedy for leishmaniasis, containing 2-deoxy-2-[(3S)-(9-phenylnonanoyloxy) -tetradecanoyl]amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-α-D-glucopyranose represented by formula (I) or a nontoxic salt thereof as the active ingredient. The above compound and its salt are efficacious in preventing and/or remedying leishmaniasis and are highly safe.

IT **223445-10-1 223445-11-2**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(leishmaniasis remedy containing glucopyranose derivative as active ingredient)

RN 223445-10-1 HCAPLUS

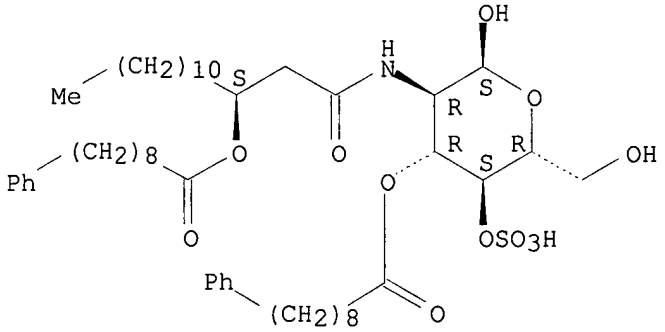
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223445-11-2 HCAPLUS
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Hattori, Y	1995	291	83	European Journal of	HCAPLUS
Kobayashi, M	1994	22	454	Experimental Hematol	HCAPLUS
Matsumoto, N	1997	36	69	Immunopharmacology	HCAPLUS
Tandon, J	1991	54	1102	Journal of Natural P	HCAPLUS

L40 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:250282 HCAPLUS
DN 130:332870
TI Parasiticides containing glucopyranose derivative against Leishmania
IN Nonaka, Shigeo
PA **Ono Pharmaceutical Co., Japan**
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11106394	A2	19990420	JP 1997-270741	19971003 <--
PRAI	JP 1997-270741		19971003 <--		

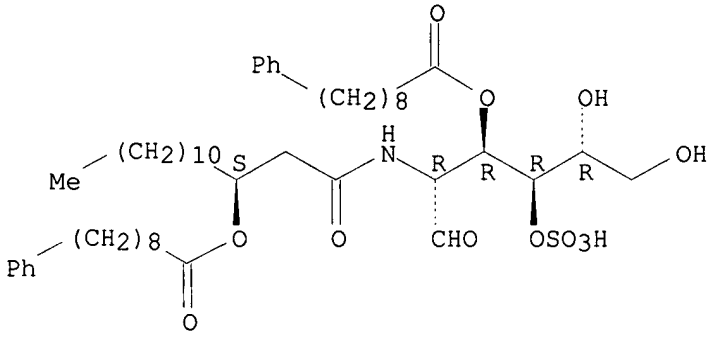
AB Pharmaceuticals for prevention and treatment of diseases caused by Leishmania contain 2-deoxy-2-[(3S)-(9-phenylnonanoyloxy)tetradecanoyl]amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-α-D-glucopyranose (I) or its salts. I Na salt was injected to mice infected with L. amazonensis to show marked decrease of lesions on skin. An ample containing I Na salt was formulated.

IT **152646-95-2**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(parasiticides containing glucopyranose derivative against Leishmania)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

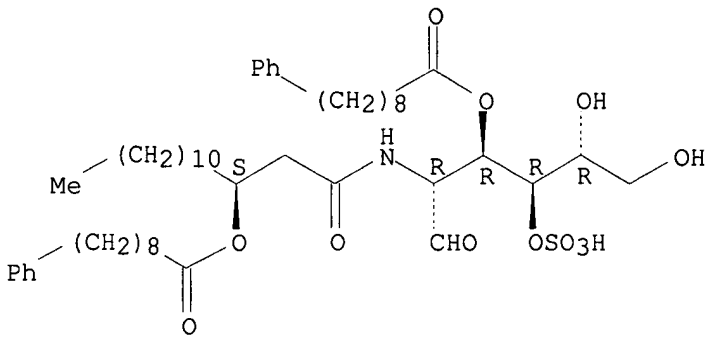


IT **111250-67-0**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(parasiticides containing glucopyranose derivative against Leishmania)

RN 111250-67-0 HCAPLUS

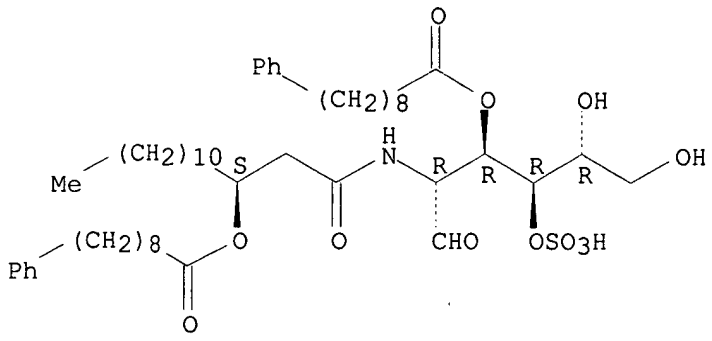
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:68201 HCAPLUS
DN 130:306125
TI Intratumoral tumor necrosis factor induction and tumor growth suppression by **ONO-4007**, a low-toxicity lipid A analog
AU Matsumoto, Norihito; Oida, Hiroji; Aze, Yoshiya; Akimoto, Akira; Fujita, Tsuneo
CS Fukui Research Institute, **Ono** Pharmaceutical Co., Ltd., Fukui, 913-8538, Japan
SO Anticancer Research (**1998**), 18(6A), 4283-4289
CODEN: ANTRD4; ISSN: 0250-7005
PB Anticancer Research
DT Journal
LA English
AB **ONO-4007** is a lipid A analog with low toxicity. The antitumor activity and tumor necrosis factor (TNF)-inducing activity of **ONO-4007** were compared with those of lipopolysaccharide (LPS) in WKAH rats bearing KDH-8 hepatoma cells. Weekly injections of **ONO-4007** (3 and 10 mg/kg i.v.) suppressed tumor growth, but LPS (0.01 and 0.1 mg/kg i.v.) did not. A single injection of **ONO-4007** (3 and 10 mg/kg i.v.) into tumor-bearing rats induced higher levels of endogenous TNF production in tumor tissues than LPS (0.001, 0.01 and 0.1 mg/kg i.v.). Repeated injections of LPS caused a reduction of TNF production in tumor tissues, whereas the reduction by **ONO-4007** was less remarkable than that by LPS. Intratumoral injections of anti-rat TNF-α antibody attenuated the antitumor effect of **ONO-4007**. The antitumor effect of **ONO-4007** is more pronounced than that of LPS and the effect is mediated by TNF produced in tumor tissues.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(intratumoral tumor necrosis factor induction and tumor growth suppression by **ONO-4007**, a low-toxicity lipid A analog)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Boujoukos, A	1993	76	3027	J Appl Physiol	
de Waal Malefyt, R	1991	174	1209	J Exp Med	MEDLINE
Denizot, F	1986	89	271	J Immunol Methods	MEDLINE
Eggermont, A	1996	14	2653	J Clin Oncol	HCAPLUS
Engelhardt, R	1991	51	2524	Cancer Res	MEDLINE
Gemsa, D	1982	161	385	Immunobiol	HCAPLUS
Kanegasaki, S	1986	99	1203	J Biochem	HCAPLUS
Kotani, S	1983	41	758	Infect Immun	HCAPLUS
Martich, G	1991	173	1021	J Exp Med	HCAPLUS
Matsumoto, N	1997	36	69	Immunopharmacol	HCAPLUS
Matsumoto, N	1998	284	189	J Pharm Exp Ther	HCAPLUS
Matsuura, M	1995	63	1446	Infect Immun	HCAPLUS
Michie, H	1988	318	1481	N Eng J Med	HCAPLUS
Nakatsuka, M	1989	11	349	Int J Immunopharmaco	HCAPLUS
Otto, F	1996	32A	1712	Eur J Cancer	HCAPLUS
Schutze, E	1994	42	121	Circ Shock	HCAPLUS
Sugiura, C	1988	79	1259	Jpn J Cancer Res	MEDLINE
Takahashi, M	1996	156	2436	J Immunol	HCAPLUS
Ulrich, J	1995	6	495	Pharm Biotechnol	HCAPLUS
Wright, S	1990	249	1431	Science	HCAPLUS
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS

L40 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:30287 HCAPLUS
DN 130:246436
TI Mechanisms by which chemotherapeutic agents augment the antitumor effects of tumor necrosis factor: involvement of the pattern shift of cytokines from Th2 to Th1 in tumor lesions
AU Inagawa, Hiroyuki; Nishizawa, Takashi; Honda, Teruko; Nakamoto, Takeru; Takagi, Koichi; Soma, Gen-Ichiro
CS Department of Molecular Medicine, Division of Bioregulation, Coloproctology Center, Takano Hospital, Kumamoto, 862-0924, Japan
SO Anticancer Research (**1998**), 18(5D), 3957-3964
CODEN: ANTRD4; ISSN: 0250-7005
PB Anticancer Research
DT Journal
LA English

AB The antitumor effect exerted by tumor necrosis factor (TNF) is characteristic in that it causes central necrosis of the tumor mass. Viable tumor cells surrounding the tumor mass remain, however, even after most of the mass is necrotized, and these cells gradually regrow and form tumors. To overcome this, we analyzed the combined effects of chemotherapeutic agents used with TNF. Alkylating agents such as cyclophosphamide altered the antitumor effect qual., leading to complete regression which TNF alone could not achieve. The mechanism, behind the enhancement of endogenous TNF production and expression of mRNA of various cytokines by the combination of chemotherapeutic agents with TNF inducer was investigated in Meth A fibrosarcoma. Seven days after the inoculation of Meth A fibrosarcoma into BALB/c mice, cyclophosphamide (CY, 100-150 mg/kg) was injected i.p., and 7 days later endogenous TNF was induced by the intradermal administration of lipopolysaccharide (LPS, 400μg/kg) or i.v. injection of **ONO-4007**, a synthetic lipid A derivative (30mg/kg). A combination therapy of LPS or **ONO-4007** with CY showed the effect of complete regression in 50-100% of tested mice, while CY, LPSp or **ONO-4007** alone did not cause complete regression. The amount of endogenous TNF induced by LPSp or **ONO-4007** around a tumor lesion with CY was 4-5 fold higher than that without CY. The expression of mRNA of transforming growth factor-β was suppressed by CY seven days after the injection, and expressions of mRNA of IL-1β and TNF-α were augmented by the administration of CY 1 to 3 h after the administration of **ONO -4007**. Some chemotherapeutic agents thus appear to augment the antitumor effect of TNF around tumor lesions, leading to tumor regression through a mechanism in which the agent changes the host's immune status, especially around a tumor lesion and pattern shift of cytokines from Th2 to Th1.

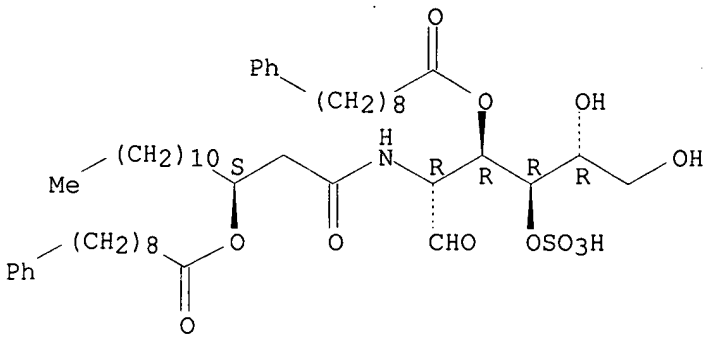
RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Asher, A	1987	138	963	J Immunol	HCAPLUS
Blick, M	1987	47	2968	Cancer Res	
Eggermont, A	1997	224	756	Annals Surgery	
Ehrke, M	1995	63	463	Int J Cancer	HCAPLUS
Fearon, D	1997	388	323	Nature	
Feinberg, B	1988	6	1328	J Clin Oncol	MEDLINE
Gerain, J	1992	4	585	Cytokine	HCAPLUS
Gorelik, L	1995	41	363	Cancer Immunol Immun	HCAPLUS
Gorelik, L	1995	154	3941	J Immunol	HCAPLUS
Hagen, T	1997	24	245	Advanced Drug Deliv	
Hahne, M	1996	274	1363	Science	HCAPLUS
Hattori, Y	1995	291	83	Eur J Parmacol	HCAPLUS
Inagawa, H	1997	17	2153	Anticancer Res	HCAPLUS
Inagawa, H	1997	17	55	Anticancer Res	HCAPLUS
Inagawa, H	1988	7	596	J Biol Resp Modif	HCAPLUS
Kuppen, P	1997	75	1497	Br J Cancer	HCAPLUS
Lejeune, F	1995	31A	1009	Eur J Cancer	MEDLINE
Manusama, E	1996	83	551	Br J Surgery	MEDLINE
Marlor, C	1992	140	1055	Am J Pathol	HCAPLUS
Matsumoto, N	1997	36	69	Immunopharmacol	HCAPLUS
McIntosh, J	1988	48	4011	Cancer Res	HCAPLUS
Nishizawa, T	1992	40	479	Chem Pharm Bull	HCAPLUS
Nishizawa, T	1991	3	224	Mol Biother	MEDLINE
Oh, J	1997	15	569	Oncogene	HCAPLUS
Oshiro, S	1994	9	359	Cancer Biother	
Palladino, M	1987	138	4023	J Immunol	HCAPLUS
Renard, N	1994	57	656	Int J Cancer	MEDLINE

Satoh, M	1987	6	512	J Biol Resp Modif	HCAPLUS
Soma, G	1989	8	837	Cancer Surveys	MEDLINE
Soma, G	1988	7	587	J Biol Resp Modif	HCAPLUS
Tomita, M	1998	18	3937	Anticancer Res	
Tsukioka, D	1997	149	239	FEMS Microbiol Let	HCAPLUS
Weiskirch, L	1994	38	215	Cancer Immunol Immun	HCAPLUS
Yamazaki, K	1998	18	3931	Anticancer Res	

L40 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:276563 HCAPLUS
DN 129:12419
TI **ONO-4007** induces specific anti-tumor immunity mediated by tumor necrosis factor-α
AU Matsushita, Kazuhiro; Kobayashi, Masanobu; Totsuka, Yasunori; Hosokawa, Masuo
CS Lab. Pathology, Cancer Inst., Hokkaido Univ. School Med., Sapporo, 060, Japan
SO Anti-Cancer Drugs (**1998**), 9(3), 273-282
CODEN: ANTDEV; ISSN: 0959-4973
PB Rapid Science Ltd.
DT Journal
LA English
AB The therapeutic effects of **ONO-4007**, a novel synthetic lipid A derivative with low toxic activity, on transplanted hepatocellular carcinoma KDH-8 in WKAH rats was investigated. **ONO-4007** brought about complete cures in about 60% of rats bearing tumor necrosis factor (TNF)-α-sensitive KDH-8 cells, whereas no complete cure was observed in rats bearing cKDH-8/11 which is identical to KDH-8 but a TNF-α-resistant cell line, KMT-17 and KEG-1. Then the influence of rabbit anti-TNF-α antibody on the therapeutic effects of **ONO -4007** against the TNF-α-sensitive KDH-8 was examined The concomitant administration of the rabbit anti-TNF-α antibody completely negated the therapeutic effects of **ONO-4007** . On the other hand, on rechallenge with tumor cells of both the KDH-8 and cKDH-8/11 cell lines, these were completely rejected in rats cured of KDH-8 tumor, although no rejection of KEG-1 was observed Moreover, Winn assay, i.e. the tumor cell neutralizing assay, indicated that CD4+ T cells were involved in the antigen-specific transplantation resistance. These findings suggest that antigen-specific T cell responses are involved in the complete cure of tumors after the treatment with **ONO-4007**, although its therapeutic effect is initiated by TNF-α.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(specific antitumor immunity induced by **ONO-4007** mediated by tumor necrosis factor-α)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Briscoe, D	1992	149	2954	J Immunol	HCAPLUS
Chang, C	1995	25	394	Eur J Immunol	HCAPLUS
Esser, M	1997	158	5612	J Immunol	HCAPLUS
Flesch, I	1995	181	1615	J Exp Med	HCAPLUS
Gorelik, L	1996	156	4298	J Immunol	HCAPLUS
Hahn, S	1995	146	57	Immunol Rev	HCAPLUS
Hayes, M	1995	86	646	Blood	HCAPLUS
Midorikawa, Y	1990	50	6243	Cancer Res	MEDLINE
Neumann, B	1996	156	1587	J Immunol	HCAPLUS
Rival, Y	1996	157	1233	J Immunol	HCAPLUS
Suda, T	1995	154	3806	J Immunol	HCAPLUS
Xu, Z	1988	48	6658	Cancer Res	HCAPLUS
Yuan, L	1995	41	355	Cancer Immunol Immun	HCAPLUS
Yuan, L	1998			Cancer Immunol Immun	

L40 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:53470 HCAPLUS
DN 128:200630
TI **ONO-4007**, an antitumor lipid A analog, induces tumor necrosis factor-α production by human monocytes only under primed state: different effects of **ONO-4007** and lipopolysaccharide on cytokine production
AU Matsumoto, Norihito; Aze, Yoshiya; Akimoto, Akira; Fujita, Tsuneo
CS Fukui Research Institute, **Ono** Pharmaceutical Co., Ltd., Fukui, Japan
SO Journal of Pharmacology and Experimental Therapeutics (**1998**), 284(1), 189-195
CODEN: JPETAB; ISSN: 0022-3565
PB Williams & Wilkins
DT Journal
LA English
AB **ONO-4007** is a synthetic lipid A analog that exhibits strong antitumor activity in several animal models via intratumoral production of tumor necrosis factor (TNF). In the present study, the cytokine-inducing effect of **ONO-4007** was investigated in human monocytes that were freshly isolated or had been incubated for 3 days with granulocyte-macrophage colony-stimulating factor (GM-CSF) or

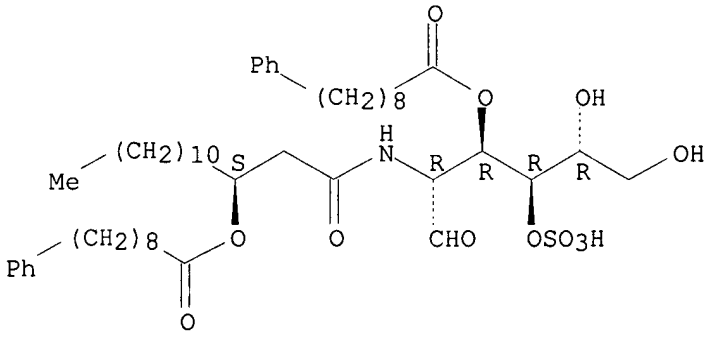
macrophage colony-stimulating factor. **ONO-4007** induced slight production of TNF-α, interleukin (IL)-1β, IL-6 and IL-12 in fresh monocytes but strongly induced TNF-α production in GM-CSF-treated monocytes. Monocytes treated with macrophage colony-stimulating factor were also primed to produce TNF-α in response to **ONO-4007**. In the production of IL-1β, IL-6 and IL-12, GM-CSF did not show a priming effect. In contrast to **ONO-4007**, lipopolysaccharide (LPS) induced significant amts. of all these cytokines in fresh monocytes. In whole blood, **ONO-4007** failed to induce TNF-α, whereas LPS and LA-15-PP (Escherichia coli-type lipid A) strongly induced TNF-α production In the GM-CSF-treated monocytes, both elimination of serum from the culture medium and anti-CD14 antibody treatment attenuated LPS-induced TNF-α production but not **ONO-4007**-induced TNF-α production This study shows that **ONO-4007** activates human monocytes/macrophages to release TNF-α only in a primed state and suggests that **ONO-4007** would activate these cells via different pathways from LPS. These differences could mean that **ONO-4007** has potent antitumor activity with lower toxicity than LPS.

IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antitumor **ONO-4007** induces TNF-α production by human monocytes only under primed state and different effects of **ONO-4007** and lipopolysaccharide on cytokine production)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Asakura, A	1996	195	300	Immunobiology	
Bauknecht, T	1994	18	231	Cancer Detect Prev	MEDLINE
Cannistra, S	1988	71	672	Blood	HCAPLUS
Das, S	1981	58	630	Blood	MEDLINE

Delude, R	1995	92	9288	Proc Natl Acad Sci U	HCAPLUS
Denizot, F	1986	89	271	J Immunol Meth	MEDLINE
Dimri, R	1994	13	239	Lymphokine Cytokine	HCAPLUS
Dipersio, J	1990	9	81	Cancer Surv	MEDLINE
Engelhardt, R	1991	51	2524	Cancer Res	MEDLINE
Engelhardt, R	1995	392	253	Prog Clin Biol Res	MEDLINE
Erickson-Miller, C	1990	8	346	Int J Cell Cloning	MEDLINE
Flick, D	1984	68	167	J Immunol Meth	HCAPLUS
Geissler, K	1989	143	140	J Immunol	HCAPLUS
Golenbock, D	1991	266	19490	J Biol Chem	HCAPLUS
Hashimoto, S	1997	89	315	Blood	HCAPLUS
Herzyk, D	1992	149	3052	J Immunol	HCAPLUS
Heumann, D	1992	148	3505	J Immunol	HCAPLUS
Hogquist, K	1991	147	2181	J Immunol	HCAPLUS
Homma, J	1985	98	395	J Biochem	HCAPLUS
Horiguchi, J	1988	157	395	Biochem Biophys Res	HCAPLUS
Kacinski, B	1991	6	941	Oncogene	HCAPLUS
Kanegasaki, S	1986	99	1203	J Biochem	HCAPLUS
Kirkland, T	1993	268	24818	J Biol Chem	HCAPLUS
Kotani, S	1983	41	758	Infect Immun	HCAPLUS
Kuramitsu, Y	1997	8	500	Anti-Cancer Drugs	HCAPLUS
Logan, T	1996	24	49	Exp Hematol	HCAPLUS
Maeda, H	1990	8	237	Vaccine	HCAPLUS
Matsuura, M	1995	63	1446	Infect Immun	HCAPLUS
Meszaros, K	1995	63	363	Infect Immun	HCAPLUS
Monroy, R	1990	54	333	Clin Immunol Immunop	HCAPLUS
Nakatsuka, M	1989	11	349	Int J Immunopharmaco	HCAPLUS
Ralph, P	1986	68	633	Blood	HCAPLUS
Ralph, P	1990	338	43	Prog Clin Biol Res	HCAPLUS
Ramakrishnan, S	1989	83	921	J Clin Invest	HCAPLUS
Ruff, M	1980	125	1671	J Immunol	HCAPLUS
Sampson-Johannes, A	1988	141	3680	J Immunol	HCAPLUS
Schumann, R	1990	249	1429	Science (Wash DC)	HCAPLUS
Schutze, E	1994	42	121	Circ Shock	HCAPLUS
Takada, H	1985	48	219	Infect Immun	HCAPLUS
Tang, R	1990	44	189	J Cell Biochem	HCAPLUS
Ulrich, J	1995	6	495	Pharm Biotechnol	HCAPLUS
Wright, S	1990	249	1431	Science (Wash DC)	HCAPLUS
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS

L40 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:773234 HCAPLUS
DN 128:97402
TI Therapeutic effects of a new synthetic lipid A analog, **ONO-4007**, on rat hepatoma KDH-8 depend on tumor necrosis factor-sensitivity of the tumor cells
AU Kuramitsu, Yasuhiro; Matsushita, Kazuhiro; Ohiro, Youichi; Obara, Manabu; Kobayashi, Masanobu; Hosokawa, Masuo
CS Lab. Pathol., Cancer Inst., Hokkaido Univ. Sch. Med., Sapporo, 060, Japan
SO Anti-Cancer Drugs (**1997**), 8(9), 898-901
CODEN: ANTDEV; ISSN: 0959-4973
PB Rapid Science Publishers
DT Journal
LA English
AB **ONO-4007** is a new synthetic lipid A derivative with low endotoxic activities. **ONO-4007** was effective against KDH-8, a tumor necrosis factor (TNF)-sensitive rat hepatoma cell line, but neither effective against KMT-17, a TNF-resistant rat fibrosarcoma cell line, nor SST-2, a TNF-resistant rat mammary adenocarcinoma cell line. We have established two sublines from KDH-8 to further examine the

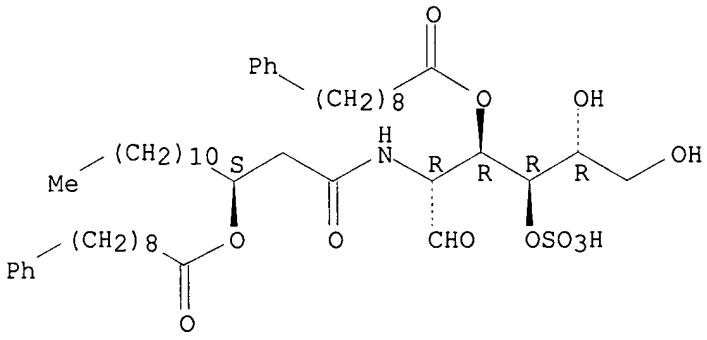
therapeutic mechanisms of **ONO-4007** in vivo: TNF-sensitive KDH-8/YK and TNF-resistant cKDH-8/11. The two sublines equally proliferated in vitro. Multiple systemic i.v. administration of **ONO-4007** was performed on days 7, 14 and 21 after tumor implantation. Although treatment with **ONO-4007** had no effect on the growth of cKDH-8/11 in WKAH rats in vivo, 60% of KDH-8/YK-bearing rats treated with **ONO-4007** survived. The administration of **ONO-4007** brought about significant therapeutic effects on KDH-8/YK-bearing rats but not on cKDH-8/11-bearing rats. These results suggest that **ONO-4007** is therapeutically useful for the treatment of TNF-α-sensitive tumors.

IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(therapeutic effects of lipid A analog, **ONO-4007**, on rat hepatoma KDH-8 depend on tumor necrosis factor-sensitivity of the tumor cells)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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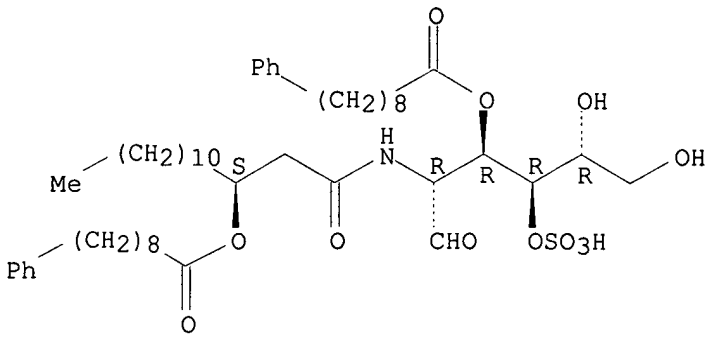
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Gatanaga, T	1989	8	278	J Biol Response Mod	HCAPLUS
Kobayashi, M	1994	22	454	Exp Hematol	HCAPLUS
Koshita, Y	1994	716	334	Ann NY Acad Sci	MEDLINE
Kueng, W	1989	182	16	Anal Biochem	MEDLINE
Kuramitsu, Y	1997	8	500	Anti-Cancer Drugs	HCAPLUS
Kuramitsu, Y	1997	8	886	Anti-Cancer Drugs	HCAPLUS
Morrison, D	1983	38	417	Annu Rev Med	
Satoh, M	1987	6	512	J Biol Response Mod	HCAPLUS
Sugiura, C	1988	79	1259	Jpn J Cancer Res	MEDLINE
Tobias, P	1986	164	777	J Exp Med	HCAPLUS
Yamazaki, M	1989	49	352	Cancer Res	HCAPLUS
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS

L40 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:773232 HCAPLUS
DN 128:97400
TI The mechanism of locally enhanced production of tumor necrosis factor-α in tumor tissues by the administration of a new synthetic lipid A analog, **ONO-4007**, in hepatoma-bearing rats
AU Kuramitsu, Yasuhiro; Ohiro, Youichi; Matsushita, Kazuhiro; Obara, Manabu; Kobayashi, Masanobu; Hosokawa, Masuo
CS Lab. Pathol., Cancer Inst., Hokkaido Univ. Sch. Med., Sapporo, 060, Japan
SO Anti-Cancer Drugs (**1997**), 8(9), 886-893
CODEN: ANTDEV; ISSN: 0959-4973
PB Rapid Science Publishers
DT Journal
LA English
AB **ONO-4007** is a new synthetic lipid A analog with low endotoxic activities. We previously found that **ONO-4007** induced the production of tumor necrosis factor (TNF)-α in rat hepatoma KDH-8 tumor tissues and brought about the regression of transplanted KDH-8 cells. By contrast, **ONO-4007** did not induce TNF-α production in spleens and sera 90 min after treatment. In the present study we attempted to elucidate how **ONO-4007** induces TNF-α production in tumor tissues locally. We found that extracellular matrix including gelatin, fibronectin and Matrigel did not induce TNF-α production in splenocytes treated with **ONO-4007** in vitro. However, splenocytes co-cultured with cKDH-8/11 tumor cells in the presence of **ONO-4007** produced more TNF-α than splenocytes cultured by themselves in the presence of **ONO-4007**. The stimulation of cKDH-8/11 cells in the presence of **ONO-4007** for splenocytes to produce TNF-α depended on the type of contact between the cells. The cKDH-8/11 cells fixed in formalin were not able to induce TNF-α production of splenocytes even in the presence of **ONO-4007**. However, syngeneic fibrosarcoma cell line KMT-17/A3, allogeneic hepatocellular carcinoma cell line LDH and rat lung endothelial cell line RLE induced TNF-α production in splenocytes, but their stimulation was weaker than that of cKDH-8/11. The soluble form of the cKDH-8/11 cell membrane did not stimulate splenocytes to produce TNF-α in the presence of **ONO-4007**. CKDH-8/11 cells did not stimulate the splenocytes devoid of macrophages to produce TNF-α in the presence of **ONO-4007**.
IT **152646-95-2, ONO 4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mechanism of locally enhanced production of TNF-α in tumor tissues by synthetic lipid A analog **ONO-4007** in hepatoma-bearing rats)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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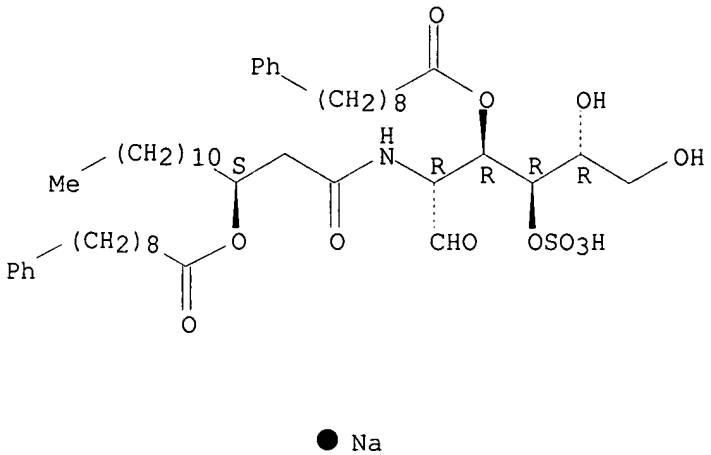
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Gatanaga, T	1989	8	278	J Biol Response Mod	HCAPLUS
Hansel, T	1989	122	97	J Immunol Methods	MEDLINE
Kobayashi, M	1994	22	454	Exp Hematol	HCAPLUS
Koshita, Y	1994	716	334	Ann NY Acad Sci	MEDLINE
Krensky, A	1983	131	611	J Immunol	HCAPLUS
Kuramitsu, Y	1997	8	500	Anti-Cancer Drugs	HCAPLUS
Kusama, T	1991	39	3244	Chem Pharmacol Bull	HCAPLUS
Mattews, N	1987		221	Lymphokines and inte	
Micallef, M	1991	33	33	Cancer Immunol Immun	HCAPLUS
Morrison, D	1983	38	417	Annu Rev Med	
Nakajima, M	1987	47	4869	Cancer Res	HCAPLUS
Nakatsuka, M	1991	13	11	Int J Immunopharmaco	HCAPLUS
Naume, B	1991	136	1	J Immunol Methods	MEDLINE
Old, L	1985	230	630	Science	MEDLINE
Sato, K	1992	83	1081	Jpn J Cancer Res	HCAPLUS
Sato, N	1985	74	883	J Natl Cancer Inst	HCAPLUS
Schmidt, R	1985	135	1020	J Immunol	HCAPLUS
Sugiura, C	1988	79	1259	Jpn J Cancer Res	MEDLINE
Tobias, P	1986	164	777	J Exp Med	HCAPLUS
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS

L40 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:700882 HCAPLUS
DN 128:14
TI **ONO-4007**. Antineoplastic biological response modifier
AU Graul, A.; Martel, A. M.; Castaner, J.
CS Prous Sci. Publishers, Barcelona, 08080, Spain
SO Drugs of the Future (**1997**), 22(8), 841-845
CODEN: DRFUD4; ISSN: 0377-8282
PB Prous
DT Journal; General Review
LA English
AB A review with 14 refs.
IT **152646-95-2, ONO-4007**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**ONO-4007**: antineoplastic biol. response modifier)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Aze, Y	1996			55th Annu Meet Jpn C	
Hattori, Y	1995	291	83	Eur J Pharmacol Mol	HCAPLUS
Imaki, K				EP 553786	HCAPLUS
Imaki, K				JP 94041175	
Kobayashi, M	1994	22	454	Exp Hematol	HCAPLUS
Matsumoto, N	1997	36	69	Immunopharmacology	HCAPLUS
Morita, S	1996	42	219	Kobe J Med Sci	HCAPLUS
Ogawa, M	1992			51st Annu Meet Jpn C	
Satoh, M	1992			51st Annu Meet Jpn C	
Satoh, M	1995	155	877	J Immunol	HCAPLUS
Takahashi, M	1996	156	2436	J Immunol	HCAPLUS
Toda, M				EP 226381	HCAPLUS
Toda, M				JP 88179885	
Tsukagoshi, S	1997			7th Int Cong Anti-Ca	
Ueda, H	1997	20	65	J Immunother	HCAPLUS
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS

L40 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:451333 HCAPLUS
DN 127:171169
TI A new synthetic lipid A analog, **ONO-4007**, stimulates the production of tumor necrosis factor-α in tumor tissues, resulting in the rejection of transplanted rat hepatoma cells
AU Kuramitsu, Yasuhiro; Nishibe, Manabu; Ohiro, Youichi; Matsushita, Kazuhiro; Yuan, Lan; Obara, Manabu; Kobayashi, Masanobu; Hosokawa, Masuo
CS Cancer Inst., Hokkaido Univ. School Medicine, Sapporo, 060, Japan
SO Anti-Cancer Drugs (**1997**), 8(5), 500-508
CODEN: ANTDEV; ISSN: 0959-4973
PB Rapid Science Publishers
DT Journal

LA English

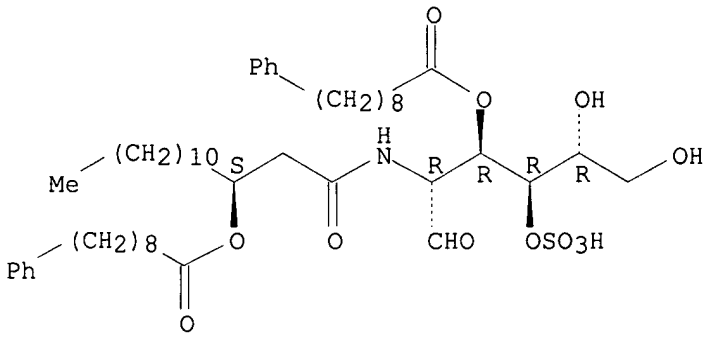
AB **ONO-4007** is a new synthetic lipid A derivative with low endotoxic activities. We have examined the therapeutic effects of **ONO-4007** on rat hepatocellular carcinoma KDH-8 cells, rat fibrosarcoma KMT-17 cells and rat mammary adenocarcinoma SST-2 cells in vivo. Multiple systemic i.v. administration of **ONO-4007** was performed on days 7, 14 and 21 after tumor implantation of KDH-8 and SST-2 cells, and on days 5, 10 and 15 after tumor implantation of KMT-17 cells. **ONO-4007** showed significant therapeutic effects on KDH-8 cells; by the administration of **ONO-4007** (2.5 mg/kg) 70% of rats were cured and by the administration of **ONO-4007** (5 mg/kg) 50% of rats were cured. Furthermore, the **ONO-4007** treatment prolonged the mean survival time of KDH-8-bearing rats. However, **ONO-4007** had no effect on KMT-17 and SST-2 cells, and it had no direct effect on the growth of KDH-8 cells in vivo. Albeit the stimulation with **ONO-4007** induced mRNA expressions of interleukin (IL)-1α, IL-6 and tumor necrosis factor (TNF)-α, those of IL-2, IL-4, IL-10 and interferon (IFN)-γ were not induced. Using a bioassay, we found that the production of TNF-α in the tumor tissues was induced by **ONO-4007** in a dose-dependent manner. KDH-8 cells were sensitive to human natural TNF-α in vitro. However, KMT-17 and SST-2 cells were resistant against TNF-α in vitro. These results suggest that **ONO-4007** is therapeutically useful for the treatment of TNF-α sensitive tumors.

IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipid A analog **ONO-4007** stimulates production of TNF-α and rejection of transplanted rat hepatoma cells)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:433713 HCAPLUS

DN 127:50948

TI Process for preparation of glucopyranose derivatives
IN Konno, Mitoshi; Hasegawa, Tomoyuki; Hachiya, Katsutoshi
PA **Ono Pharmaceutical Co., Japan**
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09157284	A2	19970617	JP 1995-321762	19951211 <--
PRAI JP 1995-321762		19951211 <--		

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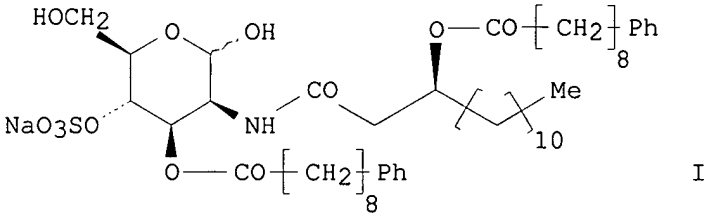

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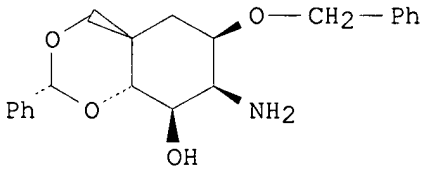
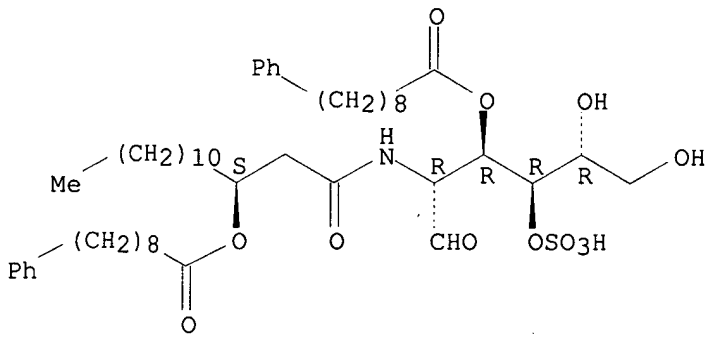


II

AB Characterized is a process for preparation of the title compds. (I) from pyranoside (II) by amidation with (S)-3-hydroxymyristic acid and (n-PrPO2H)2O , diesterification with Ph(CH2)8CO2H, hydrogenation over Pd/C, silylation, sulfuric acid esterification, and desilylation. I are useful as antitumor agents and immunity activators (no data).

IT **152646-95-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(process for preparation of glucopyranose derivs.)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

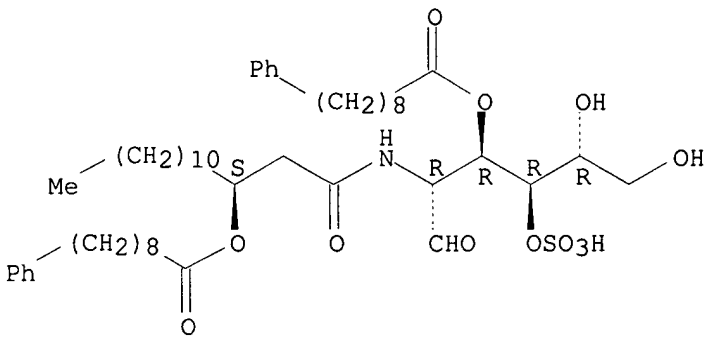


● Na

L40 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:237398 HCAPLUS
DN 126:258671
TI Induction of tumor necrosis factor in a murine tumor by systemic administration of a novel synthetic lipid A analog, **ONO-4007**
AU Ueda, Hiroshi; Yamazaki, Masatoshi
CS Department of Medicinal Chemistry, Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, 199-01, Japan
SO Journal of Immunotherapy (**1997**), 20(1), 65-69
CODEN: JOIMF8; ISSN: 1053-8550
PB Lippincott-Raven
DT Journal
LA English
AB The effect of a novel synthetic lipid A analog, **ONO-4007**, on tumor necrosis factor (TNF) production was investigated in normal and tumor-bearing mice. When vehicle was administered to normal mice, slight TNF activity was detected in some organs, but more TNF activity was detected in spleen, liver, lung, kidney, and serum when **ONO-4007** (300 μg/mouse) was administered. When vehicle was given to tumor bearers, on the other hand, little TNF was detected in most organs, but when **ONO-4007** was given, more TNF was produced in many organs, particularly spleen, liver, and tumor tissue. TNF production of spleen and liver reached a maximum 1-2 h after **ONO-4007** injection and then decreased rapidly, but that of tumor remained high for at least 6 h after administration. When mice were pretreated with dexamethasone, TNF activity of normal organs were completely inhibited, but that of tumor was only partially decreased. We have shown that **ONO-4007** causes rapid, definite growth inhibition of solid tumor, and speculate that long-sustained intratumoral TNF is the main cause of this beneficial anti-tumor effect. We report here that **ONO-4007** can induce TNF in tumor locus, and its utilization may offer a new therapeutic method.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipid A analog **ONO-4007** effect on TNF production in various tissues in relation to antitumor activity)
RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

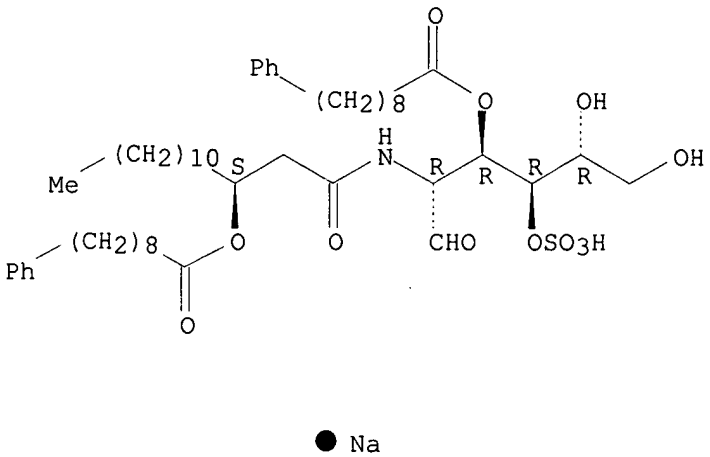
Absolute stereochemistry.



L40 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:194450 HCAPLUS
DN 126:233256
TI Synthetic lipid a produces antitumor effect in a hamster pancreatic carcinoma model through production of tumor necrosis factor from activated macrophages
AU Morita, Shinsuke; Yamamoto, Masahiro; Kamigaki, Takashi; Saitoh, Yoichi
CS First Division, Department of Surgery, Kobe University School of Medicine, Japan
SO Kobe Journal of Medical Sciences (**1996**), 42(4), 219-231
CODEN: KJMDA6; ISSN: 0023-2513
PB Kobe University School of Medicine
DT Journal
LA English
AB The antitumor effect and biol. activities of a newly synthesized lipid A analog (**ONO-4007**) were investigated in a hamster pancreatic carcinoma model. Marked and dose-dependent inhibition of tumor growth was achieved by i.p. injection twice a week for 3 wk of 10, 30 or 50 mg/kg of **ONO-4007**. Endogenous tumor necrosis factor (TNF) activities induced by **ONO-4007** were significantly greater in tumor than in serum, spleen and liver. TNF production by macrophages stimulated with **ONO-4007** after culture was much greater when culture was performed in the presence of hamster pancreatic carcinoma cells (no cell-to-cell contact). It was further found that the cytotoxic activity of TNF secreted by macrophages cultured with cancer cells was inhibited in the presence of anti-TNF neutralizing antibodies. These findings suggest that **ONO-4007** displays antitumor effects by stimulating production of endogenous TNF in tumor macrophages, possibly through activation by soluble macrophage-stimulating factors in cancer cells.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(synthetic lipid A analog **ONO-4007** antitumor effect

in pancreatic carcinoma mediation by TNF formation in macrophages)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



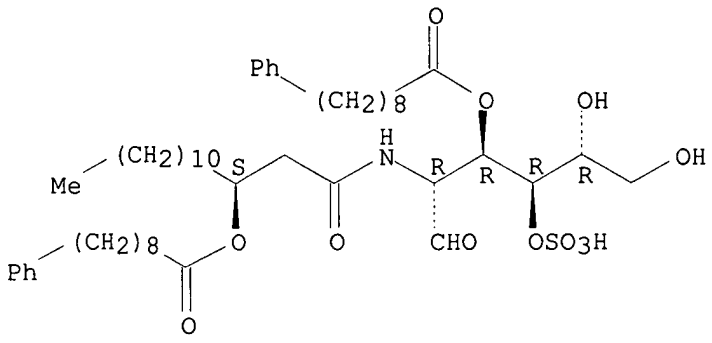
L40 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:191362 HCAPLUS
DN 126:271896
TI Restoration of immune responses in tumor-bearing mice by **ONO-4007**, an antitumor lipid A derivative
AU Matsumoto, Norihito; Aze, Yoshiya; Akimoto, Akira; Fujita, Tsuneo
CS Fukui Research Institute, **Ono** Pharmaceutical Co. Ltd., 50-10 Yamagishi, Mikuni-cho, Sakai-gun, Fukui, 913, Japan
SO Immunopharmacology (**1997**), 36(1), 69-78
CODEN: IMMUDP; ISSN: 0162-3109
PB Elsevier
DT Journal
LA English
AB **ONO-4007**, a synthetic lipid A derivative, has been found to exhibit potent antitumor activity in several animal models. In the present study, we examined the effects of **ONO-4007** on delayed-type hypersensitivity (DTH) reaction and antibody production in Meth A sarcoma-bearing BALB/c mice. The DTH reaction to sheep red blood cells (SRBC) and the IgG production against keyhole limpet hemocyanin (KLH), were depressed in tumor-bearing mice as well as in normal mice given Mitomycin C (MMC). However, **ONO-4007** restored these immune responses to normal levels. In addition, in vitro studies showed that **ONO-4007** induced the production of tumor necrosis factor-α (TNF-α) in splenic adherent cells of tumor-bearing mice more than those in normal mice. Though **ONO-4007** alone had little effect on the induction of IL-2 production in spleen cells, it augmented the Con A (Con A)-stimulated IL-2 production Moreover, **ONO-4007** had a mitogenic effect on spleen cells. These results suggest that **ONO-4007** may improve immunocompetence in tumor-bearing hosts and contribute to the induction of antitumor immunity and prevention of bacterial infections.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antitumor lipid A derivative **ONO-4007** restoration of immune response)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

RETABLE

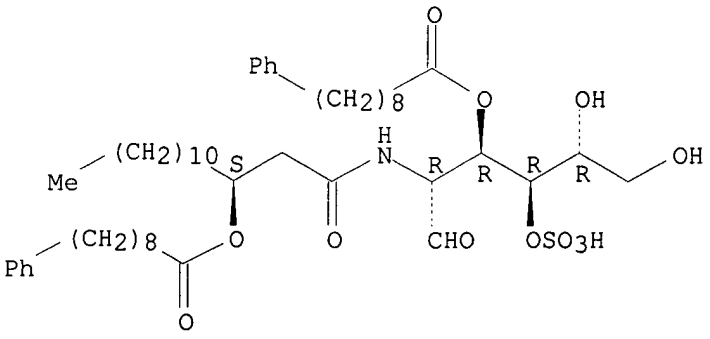
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Alleva, D	1994	153	1674	J Immunol	HCAPLUS
Altomare, D	1995	161	109	Eur J Surg	MEDLINE
Baker, L	1976	2	207	Med Pediatr Oncol	MEDLINE
Cole, W	1985	202	9	Ann Surg	MEDLINE
Dellon, A	1984	25	92	J Surg Oncol	MEDLINE
Dilworth, J	1975	2	349	Semin Oncol	MEDLINE
Eastham, J	1995	73	628	Lab Invest	MEDLINE
Fujiwara, H	1984	133	1671	J Immunol	MEDLINE
Gemsa, D	1982	161	385	Immunobiology	HCAPLUS
Gillette, R	1975	35	3774	Cancer Res	MEDLINE
Hattori, Y	1995	291	83	Eur J Pharmacol	HCAPLUS
Hoffman, R	1990	145	2220	J Immunol	HCAPLUS
Homma, J	1985	98	395	J Biochem	HCAPLUS
Humphrey, L	1980	46	893	Cancer	MEDLINE
Kanegasaki, S	1986	99	1203	J Biochem	HCAPLUS
Kobayashi, M	1994	22	454	Exp Hematol	HCAPLUS
Kong, F	1995	222	155	Ann Surg	MEDLINE
Kotani, S	1983	41	758	Infect Immun	HCAPLUS
Mandeville, R	1982	50	1280	Cancer	MEDLINE
Matsuura, M	1995	63	1446	Infect Immun	HCAPLUS
Mills, C	1991	146	2719	J Immunol	HCAPLUS
Mowat, A	1985	22	389	Scand J Immunol	MEDLINE
Nagagomi, H	1995	63	366	Int J Cancer	
Nakatsuka, M	1989	11	349	Int J Immunopharmaco	HCAPLUS
Pizzo, P	1983	67	223	Cancer Treat Rep	MEDLINE
Pogrebniak, H	1991	110	231	Surgery	MEDLINE
Reed, J	1994	145	97	Am J Pathol	MEDLINE

Sakata, T	1990	145	387	J Immunol	HCAPLUS
Sano, H	1988	79	857	Jpn J Cancer Res	MEDLINE
Schutze, E	1994	42	121	Circ Shock	HCAPLUS
Shirai, Y	1994	73	2275	Cancer	MEDLINE
Spina, C	1981	41	4324	Cancer Res	MEDLINE
Stanojevic, B	1992	39	129	Neoplasm	
Tada, T	1991	146	1077	J Immunol	HCAPLUS
Takada, H	1985	48	219	Infect Immun	HCAPLUS
Takahashi, M	1996	156	2436	J Immunol	HCAPLUS
Tamura, K	1981	41	3244	Cancer Res	MEDLINE
Taniguchi, M	1984	11	2760	Jpn J Cancer Chemoth	HCAPLUS
Tomioka, H	1992	51	24	J leukocyte Biol	HCAPLUS
Tsuchiya, Y	1988	141	699	J Immunol	HCAPLUS
Ulrich, J	1995	6	495	Pharm Biotechnol	HCAPLUS
Urbaschek, B	1984	14	209	Circ Shock	HCAPLUS
Urbaschek, R	1987	9	S607	Rev Infect Dis	HCAPLUS
Wasserman, J	1989	65	36	Bull NY Acad Med	MEDLINE
Yang, D	1994	38	287	Cancer Immunol Immun	HCAPLUS
Zou, J	1992	148	648	J Immunol	HCAPLUS

L40 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:2072 HCAPLUS
DN 126:155764
TI Activation of peripheral blood monocyte by colony-stimulating factors secreted from human pancreatic carcinoma cells
AU Takase, Shiro; Yamamoto, Masahiro; Kamigaki, Takashi; Saitoh, Yoichi
CS Sch. Med., Kobe Univ., Kobe, 650, Japan
SO Kobe Daigaku Igakubu Kiyo (**1996**), 57(1/2), 67-74
CODEN: KDIKAX; ISSN: 0075-6431
PB Kobe Daigaku Igakubu
DT Journal
LA Japanese
AB Activation of the monocyte or macrophage infiltrating to malignant tumor is one of the most important targets of the biol. response modifier. In present report, the authors studied the cytokines secreted from pancreatic carcinoma cells, which affected production of tumor necrosis factor-alpha (TNF-α) by monocytes. Four pancreatic carcinoma cells (AsPC-1, BxPC-3, MIA-PaCa2 and Panc-1) and lipid A analog, **ONO-4007** as immunomodulator were used in this study. After cultured with cancer cells (no cell-to-cell contact), monocytes produced greater TNF-α by **ONO-4007** stimulation, compared with those without cancer cells. TNF-α levels in supernatant of monocytes, which were stimulated by **ONO-4007** (0.3 mg/mL) after culture with MIA-PaCa2 or Panc-1 cells for 48 h were essentially similar (1354 or 1582 pg/mL), and were higher than those with BxPC-3 or AsPC-1 (775 or 666 pg/mL). MIAPaCa2 and Panc-1 selected macrophage colony-stimulating factor (M-CSF) in their supernatants, while BxPC-3 secreted granulocyte-macrophage CSF (GM-CSF). M-CSF levels in the supernatants of cancer cells were 3-10 fold higher than GM-CSF. M-CSF and GM-CSF were not detected in the conditioned medium of AsPC-1. TNF-α production by monocytes cultured with supernatants of MIAPaCa2 or Panc-1 was inhibited in the presence of anti-M-CSF antibodies. Similarly, TNF-α production by monocyte decreased when BxPC-3 supernatant was pre-incubated with anti-GM-CSF antibodies. Anti-M-CSF or GM-CSF antibodies, however, did not affect the TNF-α production by monocyte which was cultured with AsPC-1 supernatant. These findings suggest that M-CSF or GM-CSF secreted from pancreatic carcinoma cells could enhance TNF-α production by monocytes, when **ONO-4007** was used as immunomodulator.

L40 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:432651 HCAPLUS
DN 125:131879
TI Defective calcium influx in rat myelomonocytic leukemia cells which are resistant to differentiation-inducing effects of lipid A
AU Shinobu, Noriaki; Kobayashi, Masanobu; Wang, Jingxin; Li, Yong-Qui; Imai, Kiyotoshi; Matsuno, Kazuhiko; Hosokawa, Masuo
CS Laboratory Pathology, Cancer Institute, Hokkaido University School Medicine, Sapporo, 060, Japan
SO Experimental Cell Research (**1996**), 226(1), 191-196
CODEN: ECREAL; ISSN: 0014-4827
PB Academic
DT Journal
LA English
AB We compared the calcium mobilization in parent lipid A-sensitive leukemia cells (P2) and lipid A-resistant cells (LR) after treating them with lipid A in order to clarify the signal transduction involved in the differentiation induced by lipid A. Lipid A induced differentiation in P2 cells; however, LR cells were completely resistant to it. A dramatic elevation fo intracellular free calcium ion concentration ([Ca2+]i) occurred in P2 cells, but only a slight elevation of [Ca2+]i in LR cells. Calcium ionophore in combination with lipid A induced differentiation in LR cells. An elevation of [Ca2+]i observed in P2 cells was abrogated by an addition of EGTA, which partially inhibited the differentiation of P2 cells stimulated by lipid A. Altogether, these data indicate that calcium influx is essential for the differentiation of P2 cells stimulated by lipid A and that defective calcium influx is responsible for the resistance to lipid A in LR cells.
IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(defective calcium influx in myelomonocytic leukemia cells and resistance differentiation-inducing effects of lipid A)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:185645 HCAPLUS
DN 124:229634
TI LPS induces NK1.1+ αβ T cells with potent cytotoxicity in the liver of mice via production of IL-12 from Kupffer cells
AU Takahashi, Motoyoshi; Ogasawara, Kouetsu; Takeda, Kazuyoshi; Hashimoto, Wataru; Sakihara, Hiroshi; Kumagai, Katsuo; Anzai, Ryoichi; Satoh, Masayuki; Seki, Shuhji
CS Dep. Microbiol., Tohoku Univ. Sch. Dentistry, Sendai, Japan
SO Journal of Immunology (**1996**), 156(7), 2436-42
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
AB The authors recently reported that systemic administration of IL-12 into mice activates NK1.1+ αβ T cells with intermediate TCR (NK1+TCRint) and induces strong MHC-unrestricted cytotoxicity in C57BL/6 mice. In the present report, the authors examined the effect of LPS on Kupffer cells and NK1+TCRint cells in C57BL/6 mice. Administration of LPS, as well as synthetic lipid A analog (**ONO-4007**), but not detoxified LPS, induces the increase of NK1 expression of NK1+TCRint cells (NK1highTCRint) and the acquisition of strong MHC-unrestricted cytotoxicity of these cells against NK-sensitive and NK-resistant targets as does IL-12 administration. LPS as well as **ONO-4007** induced IL-12 mRNA in hepatic mononuclear cells, mainly in plastic-adherent Kupffer cells. LPS-induced cytotoxicity of hepatic mononuclear cells was greatly reduced by in vivo injections of anti-IL-12 Ab, to a lesser extent by anti-IFN-γ Ab, but not by anti-IL-1 nor anti-TNF-α Ab. Pretreatment of mice with LPS induced inhibition of hepatic metastases of i.v. injected EL4 cells in C57BL/6 euthymic and athymic mice and this antimetastasis was inhibited by injection of anti-IL-12 Ab. This antimetastatic effect of LPS in the liver was also observed in different strains of mice and tumors. In contrast to IL-12, however, LPS was not so effective when administered after tumor inoculation. These results revealed that LPS (lipid A) stimulates NK1+TCRinT cells through IL-12 production from Kupffer cells and suggest that bacterial components, probably including those from intestine, are activators of Kupffer cells and NK1+TCRint cells in the liver. It is also suggested that the host condition as well as LPS-induced cytokines other than IL-12 may affect antitumor effect induced by LPS in the liver.

L40 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:888355 HCAPLUS
DN 124:346
TI Lipid A and the lipid A analog anti-tumor compound **ONO-4007** induce nitric oxide synthase in vitro and in vivo
AU Hattori, Yoshiyuki; Szabo, Csaba; Gross, Steven S.; Thiemermann, Christoph; Vane, John R.
CS The William Harvey Research Institute, St. Bartholomew's Hospital Medical College, Charterhouse Square, London, EC1M 6BQ, UK
SO European Journal of Pharmacology, Molecular Pharmacology Section (**1995**), 291(2), 83-90
CODEN: EJPPET; ISSN: 0922-4106
PB Elsevier
DT Journal
LA English
AB The ability of lipid A and the antitumor compound, **ONO-4007** (sodium 2-deoxy-2-[3S-(9-phenylnonanoyloxy)tetradecanoyl]amin o-3-O-(9-phenylnonanoyl)-D-glucopyranose 4-sulfate) to induce nitric oxide (NO) synthase was investigated in vitro and in vivo, in comparison to the

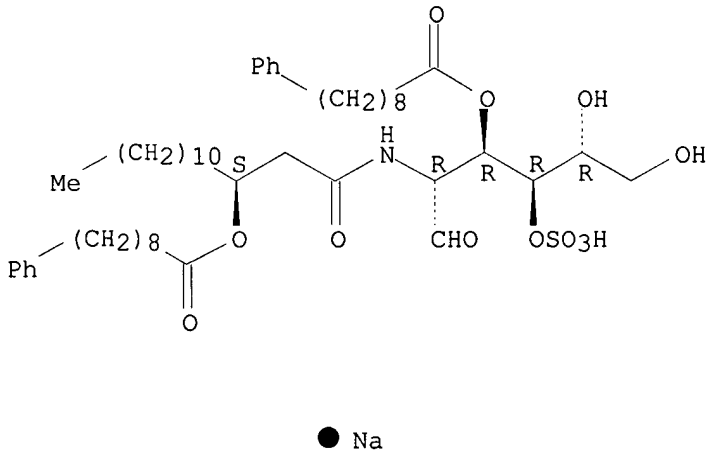
effects of lipopolysaccharide and di-and monophosphoryl lipid A. In J774.2 macrophages, lipopolysaccharide, di-and monophosphoryl lipid A and **ONO-4007** (10-10 g/mL) alone, or in combination with interferon-, induced NO synthase (order of potency: lipopolysaccharide > diphosphoryl lipid A > monophosphoryl lipid A > **ONO-4007**). **ONO-4007** increased the activity of the inducible NO synthase in the lung of anesthetized rats (20% of the increase caused by bacterial lipopolysaccharide). Thus, **ONO-4007** is a weak inducer of the inducible isoform of NO synthase in vitro and in vivo. The finding that di-and monophosphoryl lipid A also induce NO synthase indicates that the lipid A moiety of lipopolysaccharide contributes to the induction of NO synthase by lipopolysaccharide. The induction of NO synthase by **ONO-4007**, resulting in the formation of cytotoxic NO may contribute to the antitumor activity of the compound

IT **152646-95-2, ONO-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipid A and the lipid A analog antitumor compound **ONO-4007** induce nitric oxide synthase in vitro and in vivo)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:682338 HCAPLUS

DN 123:109828

TI Inhibition of TNF-triggering activity of lipopolysaccharide by a proteinaceous factor from normal mouse liver extract

AU Satoh, Motonobu; Matsumura, Tadashi; Nakamoto, Mitsunori; Yamazaki, Masatoshi

CS Fac. Pharmaceutical Sci., Teikyo Univ., Kanagawa, 199-01, Japan

SO Journal of Immunology (**1995**), 155(2), 877-85
CODEN: JOIMA3; ISSN: 0022-1767

PB American Association of Immunologists

DT Journal

LA English

AB Recent studies have revealed that animals have evolved a wide range of

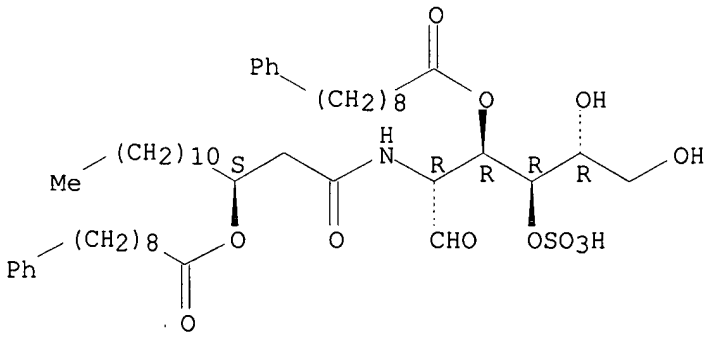
protective systems against the deleterious effects of LPS, but the mol. mechanisms in the barrier functions of liver against enterobacterial LPS, particularly in mammals, are poorly understood. In this study, we extracted a soluble fraction from the liver of normal mice (normal liver extract, NLE) and examined its effect on biol. activities of LPS. Preincubation of NLE and LPS suppressed serum-dependent TNF induction (TNF-triggering activity) of LPS; the effect was dose-dependent and overcome by increasing LPS concentration, but treatment of macrophages with NLE showed no effect. Separation by ultrafiltration and protease sensitivity demonstrated that the factor(s) in NLE was a protein(s). We tentatively called this liver LPS-inactivating factor (LLIF). LPS inactivation by LLIF was temperature-dependent and required the coexistence of divalent cations. LLIF also suppressed a synthetic lipid A analog, **ONO-4007**. Pretreatment of LPS with serum rendered LPS refractory to the action of LLIF. However, LLIF was unable to inhibit limulus amebocyte lysate activation by LPS. Direct interaction of LLIF and lipid A was evident by the method of [1-14C]**ONO-4007** binding to solid-phase LLIF, but treatment of [1-14C]**ONO-4007** with LLIF generated no degradative products. These results suggest that LLIF probably interacts with the lipid A portion of LPS and interferes with the association of LPS and LBP (LPS-binding protein) in serum, and that LLIF may be one of the protective mols. in liver against the gastrointestine-derived LPS.

IT **152646-95-2, Ono-4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(TNF-triggering activity of lipopolysaccharide reactivity with)

RN 152646-95-2 HCAPLUS

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:671405 HCAPLUS

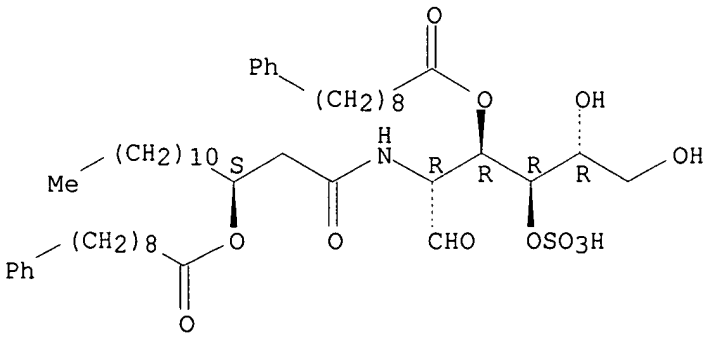
DN 121:271405

TI **ONO-4007**, a new synthetic lipid A derivative, induces differentiation of rat myelomonocytic leukemia cells in vitro and in vivo

AU Kobayashi, Masanobu; Nagayasu, Hiroki; Hamada, Jun-ichi; Takeichi,

Noritoshi; Hosokawa, Masuo
CS Cancer Institute, Hokkaido University School Medicine, Sapporo, Japan
SO Experimental Hematology (New York, NY, United States) (**1994**), 22(5), 454-9
CODEN: EXHMA6; ISSN: 0301-472X
DT Journal
LA English
AB The authors have examined the differentiation-inducing effects of **ONO-4007**, a new synthetic lipid A derivative with low endotoxic activities, on a rat myelomonocytic cell line, c-WRT-7, in vitro and in vivo. **ONO-4007** induced the differentiation of c-WRT-7 cells into macrophage-like cells and inhibited the proliferation of c-WRT-7 cells in vitro. Stimulation with **ONO-4007** induced mRNA expression of interleukin-1α (IL-1α), IL-6, and tumor necrosis factor-α (TNF-α), which have been reported to induce differentiation of several leukemia cell lines. However, autocrine production of these cytokines may not be involved in the mechanisms of differentiation induced by **ONO-4007**, because the treatment with IL-1α, IL-6, or TNF-α does not induce the differentiation of c-WRT-7 cells. In vivo treatment by i.v. administration of **ONO-4007** resulted in a significant prolongation of survival time of the rats inoculated i.v. with c-WRT-7 cells compared with that of untreated rats. These results suggest that **ONO-4007** can be therapeutically useful for the treatment of leukemia.
IT **152646-95-2, ONO 4007**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(new synthetic lipid A derivative **ONO-4007** induces differentiation of rat myelomonocytic leukemia cells)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

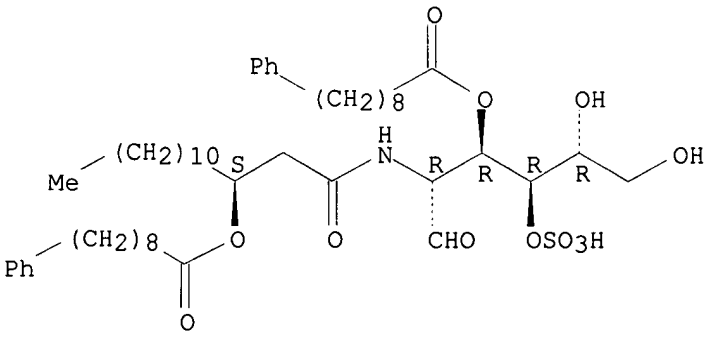
Absolute stereochemistry.



L40 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:595108 HCAPLUS
DN 121:195108

TI Activation of tumor-infiltrating macrophages by a synthetic lipid A analog (**ONO-4007**) and its implication in antitumor effects
AU Yang, De; Satoh, Motonobu; Ueda, Hiroshi; Tsukagoshi, Shigeru; Yamazaki, Masatoshi
CS Fac. Pharm. Sci., Teikyo Univ., Sagamiko, 199-01, Japan
SO Cancer Immunology Immunotherapy (**1994**), 38(5), 287-93
CODEN: CIIMDN; ISSN: 0340-7004
DT Journal
LA English
AB **ONO-4007** is a novel synthetic analog of lipid A subunit and has been shown to exert antitumor activities on various exptl. tumors with less toxicity than lipo-polysaccharide. It remains unclear, however, what biol. activities of this compound are relevant to its antitumor effects. We therefore investigated the activation of macrophages by **ONO-4007** in vitro and in vivo and its implication in antitumor effects, using mouse MM46 mammary tumor as an exptl. model. I.v. injection of **ONO-4007** produced significant therapeutic effects on this solid tumor. **ONO-4007** could stimulate glycogen-elicited peritoneal macrophages in vitro, not only to produce tumor necrosis factor (TNF), but also to exert cytocidal activities against MM46 cells in vitro. Substantial TNF production was induced in tumor tissue by i. v. injection of **ONO-4007**, and its successive administration to tumor-bearing mice gave tumor-infiltrating macrophages a prominent in vitro tumoricidal activity and primed them for in vitro TNF secretion. These results suggest that activation of tumor-infiltrating macrophages to a direct tumoricidal state as well as to TNF secretion in tumor tissues may be at least some of the antitumor effects of this novel lipid A analog.
IT **152646-95-2, ONO 4007**
RL: BIOL (Biological study)
(TNF formation stimulation by, as lipid A analog, in macrophages, antitumor activity in relation to)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

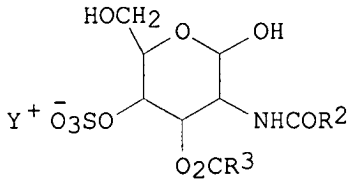


L40 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:116838 HCAPLUS

DN 120:116838
TI Preparation of salts of glucopyranose derivative and its intermediates
IN Imaki, Katsuhiro; Hashimoto, Shinsuke; Wakatsuka, Hirohisa
PA **Ono Pharmaceutical Co., Ltd., Japan**
SO Eur. Pat. Appl., 32 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 553786	A2	19930804	EP 1993-101202	19930127 <--
	EP 553786	A3	19960313		
	EP 553786	B1	20020417		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CA 2088128	AA	19930801	CA 1993-2088128	19930126 <--
	CA 2088128	C	20021029		
	JP 06041175	A2	19940215	JP 1993-31313	19930127 <--
	AT 216393	E	20020515	AT 1993-101202	19930127 <--
	PT 553786	T	20020830	PT 1993-101202	19930127 <--
	ES 2174840	T3	20021116	ES 1993-101202	19930127 <--
	US 5294723	A	19940315	US 1993-10163	19930128 <--
	KR 168876	B1	19990115	KR 1993-1202	19930130 <--
	US 5733927	A	19980331	US 1995-465470	19950605 <--
	JP 09194495	A2	19970729	JP 1997-47034	19970214 <--
	JP 2906228	B2	19990614		
PRAI	JP 1992-42185	A	19920131 <--		
	JP 1992-155913	A	19920522 <--		
	JP 1993-31313	A3	19930127 <--		
	US 1993-10163	A3	19930128 <--		
	US 1994-183845	B3	19940121 <--		

OS MARPAT 120:116838
GI



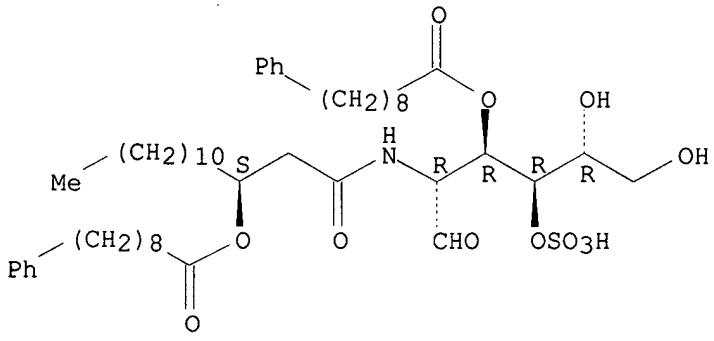
I

AB Title compds. I [R2 = Ph(CH2)8CO2CH[Me(CH2)10]CH2CH2; R3 = Ph(CH2)8; Y+ = Na, (HOCH2)3CNH3+] useful for treatment of immunodeficiencies or tumor (no data), are prepared Na 2-[3(S)-(9-phenylnonanoyloxy)tetradecanoyl]amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-6-O-tert-butylsilyl-2-deoxy-D-glucopyranose (preparation given) to which in EtOH was added AcOH and H2O to give after workup 3-(S)-I [R2 = Ph(CH2)8CO2CH[Me(CH2)10]CONH, R3 = Ph(CH2)8, Y+ = Na] (II). An ampul formulation comprising II is given.
IT **152646-92-9P 152646-93-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of drug)
RN 152646-92-9 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-

, 3-benzenenonanoate 4-(hydrogen sulfate), calcium magnesium sodium salt, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



●x Ca

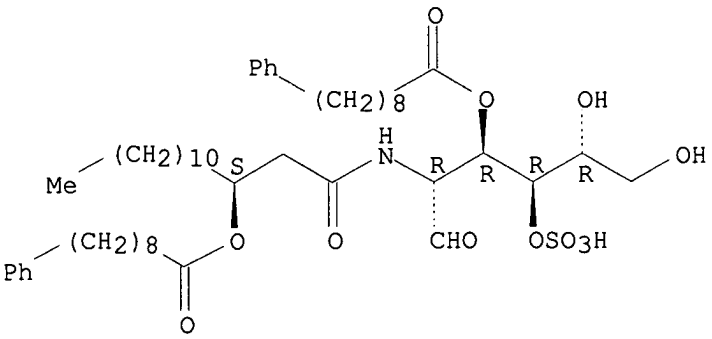
●x Mg

PAGE 2-A

●x Na

RN 152646-93-0 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium salt (2:1), (S)- (9CI) (CA INDEX NAME)

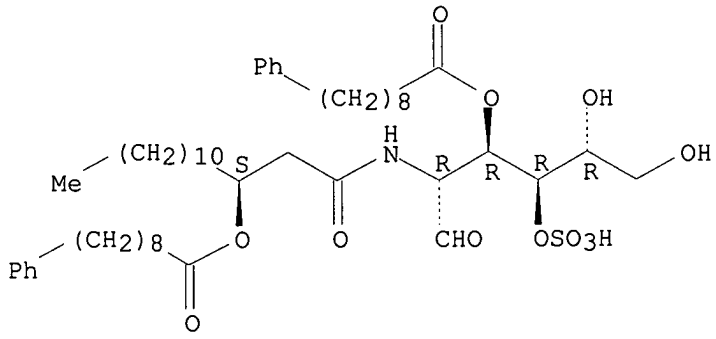
Absolute stereochemistry.



●1/2 Ca

IT **152646-95-2P 152646-96-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as drug)
RN 152646-95-2 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



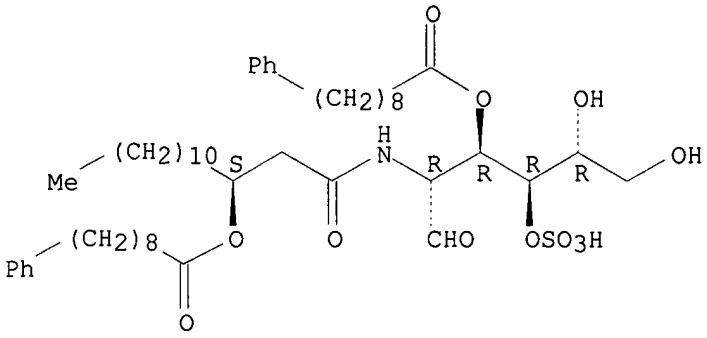
● Na

RN 152646-96-3 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (S)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (9CI) (CA INDEX NAME)

CM 1

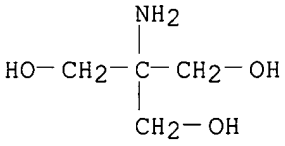
CRN 111250-67-0
CMF C50 H79 N O12 S

Absolute stereochemistry.



CM 2

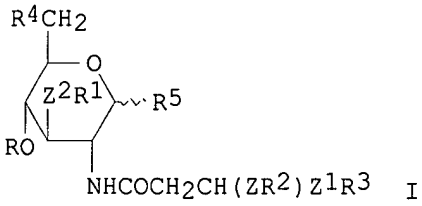
CRN 77-86-1
CMF C4 H11 N O3



L40 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:637216 HCAPLUS
DN 107:237216
TI Preparation of glucosamine derivatives as immunostimulants and antitumor agents
IN Toda, Masaaki; Shimoji, Katsuichi; Sasaki, Yutaro
PA **Ono Pharmaceutical Co., Ltd., Japan**
SO Eur. Pat. Appl., 113 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 226381	A2	19870624	EP 1986-309377	19861202 <--
	EP 226381	A3	19881214		
	EP 226381	B1	19920205		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 72443	E	19920215	AT 1986-309377	19861202 <--
	ES 2032386	T3	19930216	ES 1986-309377	19861202 <--
	JP 63179885	A2	19880723	JP 1986-287704	19861204 <--
	JP 04074359	B4	19921126		
	US 4925929	A	19900515	US 1989-338090	19890414 <--
	US 36385	E	19991109	US 1993-64549	19930520 <--
PRAI	JP 1985-273440	A	19851206 <--		
	JP 1986-210379	A	19860906 <--		
	EP 1986-309377	A	19861202 <--		
	US 1986-938308	B2	19861205 <--		
	JP 1987-106298	A	19870501 <--		
	US 1988-188873	B2	19880502 <--		

US 1989-338090 A5 19890414 <--
OS MARPAT 107:237216
GI



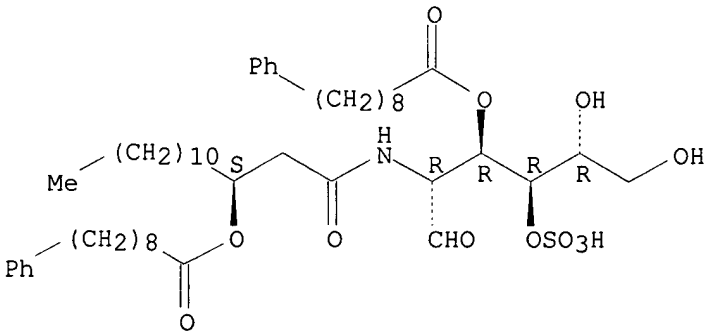
I

AB The title lipid A analogs [I; R = SO3H; Z = a bond, C2-20 oxycarbonylalkyl; R1, R2, R3 = H, (substituted)phenyl(oxy), (substituted)naphthyl(oxy); Z1 = C1-20 alkylene; Z2 = C2-20 oxycarbonyl;R4 = H, OH; R5 = H, OH, alkoxy; excluding R1 = R2 = R3 = H], useful as agents for enhancing activity of cellular immunity and antitumor agents, were prepared SO3-pyridine complex (230 mg) was added to a solution of 653 mg I [R = H, Z2R1 = ZR2 = O2C(CH2)3Ph, Z1R3 = C11H23, R4 = Me3CSiMe2O; R5 = OH] which was prepared in 5 steps from benzyl 2-deoxy-2-amino-4,6-isopropylidene-β-D-glucopyranoside, in pyridine and the mixture was stirred for 4 h at room temperature to give I [R = HO3S, Z2R1 = ZR2 = O2C(CH2)3Ph, Z1R3 = C11H23, R4 = Me3CSiMe2O; R5 = OH], which was treated with AcOH in MeOH at room temperature for 9 h to give I [R = HO3S, Z2R1 = ZR2 = O2C(CH2)3Ph, Z1R3 = C11H23, R4 = R5 = OH]. I [R = HO3S, Z2R1 = ZR2 = O2C(CH2)8Ph, Z1R3 = C11H23, R4 = OH, R5 = H] in vitro had blastogenic index of 58 in lymphocytes of mice and induced tumor necrosis factor in mice whose serum solution obtained after the administration of I showed 100% cytotoxicity against mice L-M cells.

IT **111250-67-0P 111250-71-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as immunostimulant and antitumor agent)

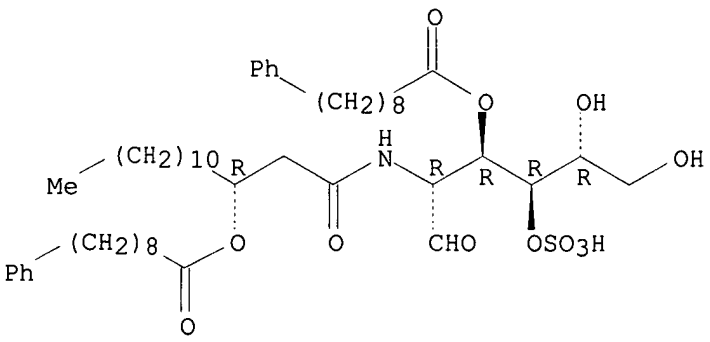
RN 111250-67-0 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 111250-71-6 HCAPLUS
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 08:47:03 ON 31 JAN 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l44 bib abs hitstr tot

L44 ANSWER 1 OF 8 USPATFULL on STN
AN 2004:95313 USPATFULL
TI Glucopyranose derivatives and medicaments for preventing and/or treating HIV infection diseases comprising the same as an active ingredient
IN Fukushima, Daikichi, Osaka, JAPAN
Shibayama, Shiro, Osaka, JAPAN
Tada, Hideaki, Osaka, JAPAN
PA ONO PHARMACEUTICAL CO., LTD. (non-U.S. corporation)
PI US 2004072767 A1 20040415
AI US 2003-668290 A1 20030924 (10)
RLI Continuation of Ser. No. US 2000-719816, filed on 18 Dec 2000, ABANDONED A 371 of International Ser. No. WO 1999-JP3180, filed on 15 Jun 1999, UNKNOWN
PRAI JP 1998-183276 19980616 <--
DT Utility
FS APPLICATION
LREP SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., SUITE 800, WASHINGTON, DC, 20037
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1747
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a medicament for preventing and/or treating HIV infectious diseases comprising a compound of formula (J) as active ingredient and glucopyranose derivative of formula (W) or non-toxic salts thereof (the symbols in the formula are as described in the specification).

A glucopyranose derivative of formulae (J) or (W) or a non-toxic salt thereof is useful as a medicament for preventing and/or treating HIV infectious disease (AIDS). ##STR1##

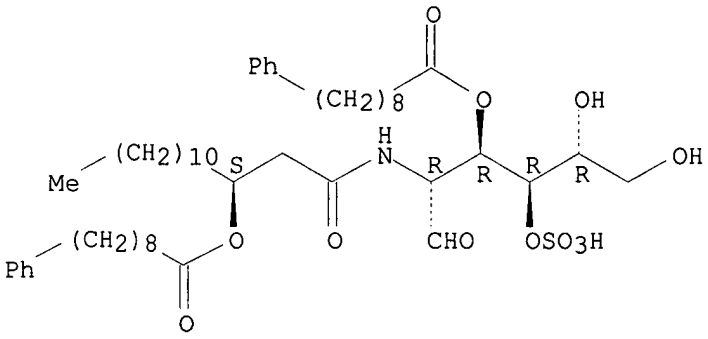
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **152646-95-2P 252762-90-6P**
(glucopyranose derivs. for prevention and/or treatment of HIV infection)

RN 152646-95-2 USPATFULL

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

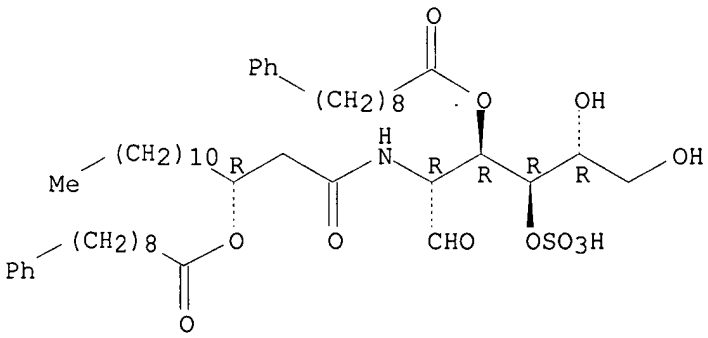


● Na

RN 252762-90-6 USPATFULL

CN D-Glucose, 2-deoxy-2-[[(3R)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

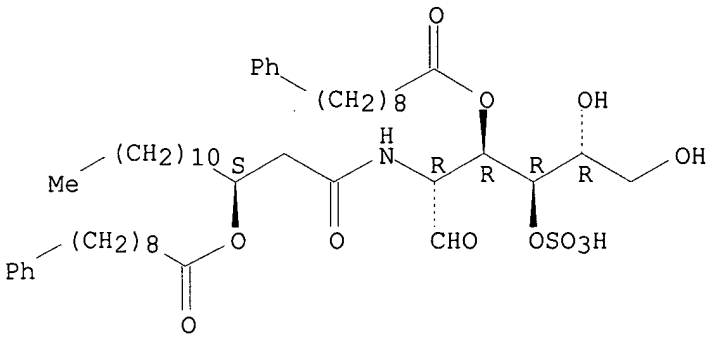
IT **111250-67-0**
(glucopyranose derivs. for prevention and/or treatment of HIV infection)

RN 111250-67-0 USPATFULL

CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen

sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 2 OF 8 USPATFULL on STN
AN 2002:332826 USPATFULL
TI Immunosuppressant containing glucopyranose derivative as active ingredient
IN Soma, Gen-ichiro, Tokyo, JAPAN
Omawari, Nagashige, Osaka, JAPAN
PA Ono Pharmaceutical Co., Ltd., Osaka, JAPAN (non-U.S. corporation)
PI US 6495678 B1 20021217
WO 9956744 19991111
AI US 2000-674808 20001106 (9)
WO 1999-JP2362 19990506
PRAI JP 1998-137402 19980506 <--
DT Utility
FS GRANTED
EXNAM Primary Examiner: Barts, Samuel; Assistant Examiner: Khare, Devesh
LREP Sughrue Mion, PLLC
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 706
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An immunosuppressant comprising Glucopyranose derivatives of the formula (I): ##STR1##

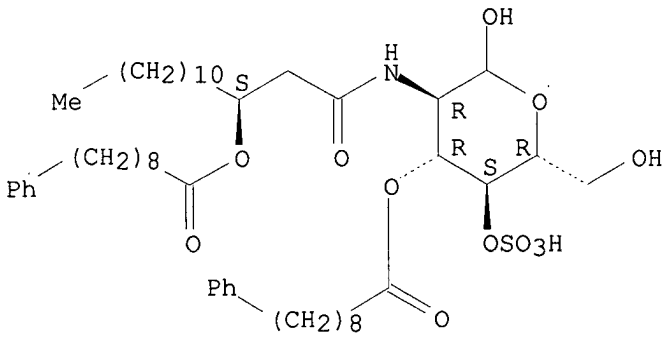
wherein R is H, OH etc; G is --CH.sub.2CH(R.sup.1--R.sup.2)(R.sup.3--R.sup.4), in which R.sup.1 is a single bond, OCO-alkyl; R.sup.2, R.sup.4 is H, phenyl which may be substituted by halogen atoms etc.; R.sup.3 is alkylene; R.sup.5 is OCO-alkyl, R.sup.6 is H, phenyl which may be substituted by halogen atoms etc. or R.sup.5--R.sup.6 is OCO--Z-(dialkoxyphenyl); R.sup.7 is H, CH.sub.2OH etc; or non-toxic salts thereof as active ingredient.

Glucopyranose derivatives of the formula (I) or non-toxic salts thereof possess an activity of immunosuppression, and being useful as the prevention and/or treatment of diseases caused by abnormal enhancement of immunity, e.g. allergic diseases, autoimmune diseases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **249299-66-9**
(immunosuppressant containing glucopyranose derivative as active ingredient)
RN 249299-66-9 USPATFULL

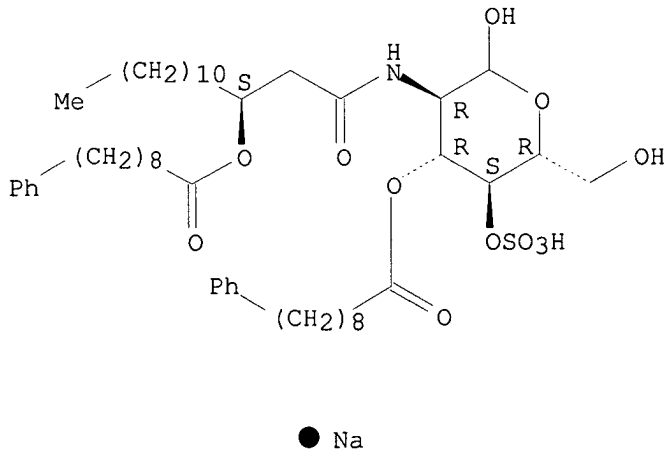
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **249299-67-0**
(immunosuppressant containing glucopyranose derivative as active ingredient)
RN 249299-67-0 USPATFULL
CN D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



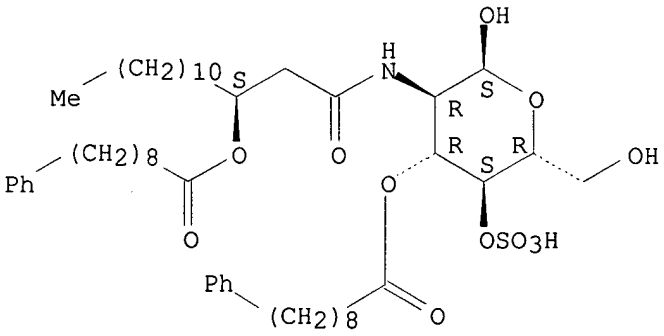
L44 ANSWER 3 OF 8 USPATFULL on STN
AN 2002:224593 USPATFULL
TI Leishmaniasis remedy containing glucopyranose derivative as the active ingredient
IN Nonaka, Shigeo, Naha, JAPAN
PA University of the Ryukyu, Okinawa, JAPAN (non-U.S. corporation)
PI US 6444648 B1 20020903
WO 9918975 19990422
AI US 2000-529333 20000717 (9) <--
WO 1998-JP4537 19981008 <--
20000717 PCT 371 date
PRAI JP 1997-277656 19971009 <--

DT Utility
FS GRANTED
EXNAM Primary Examiner: Riley, Jezia
LREP Knobbe, Martens, Olson, Bear, LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 285
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A leishmaniasis preventing and/or treating agent having 2-deoxy-2-[(3S)-(9-phenylnonanoyloxy)tetradecanoyl]amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-α-D-glucopyranose represented by a formula (I) or a non-toxic salt thereof as an effective ingredient.
##STR1##

2-deoxy-2-[(3S)-(9-phenylnonanoyloxy)tetradecanoyl]amino-3-O-(9-phenylnomanoyl)-4-O-sulfo-α-D-glucopyranose represented by a formula (I) or a non-toxic salts effectively functions to prevent and/or treat leishmaniasis, and is a highly safe compound.

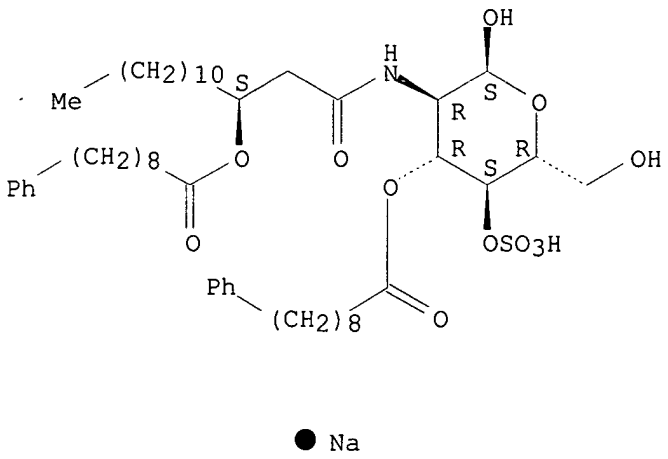
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **223445-10-1 223445-11-2**
(leishmaniasis remedy containing glucopyranose derivative as active ingredient)
RN 223445-10-1 USPATFULL
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223445-11-2 USPATFULL
CN α-D-Glucopyranose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

L44 ANSWER 4 OF 8 USPATFULL on STN
AN 2001:63702 USPATFULL
TI Use of alkylated iminosugars to treat multidrug resistance
IN Jacob, Gary S., Creve Coeur, MI, United States
PA G.D. Searle & Company, Chicago, IL, United States (U.S. corporation)
PI US 6225325 B1 20010501
AI US 1998-189177 19981110 (9) <--
PRAI US 1997-65051P 19971110 (60) <--
DT Utility
FS Granted
EXNAM Primary Examiner: Jones, Dwayne C.
LREP Senniger, Powers, Leavitt & Roedel
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1991
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for preventing, reducing, or reversing multidrug resistance (MDR) during cancer chemotherapy in patients undergoing treatment with therapeutically effective amounts of chemotherapeutic agents are provided. The methods comprise administering an anti-MDR effective amount of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol or galactitol iminosugar to a patient.

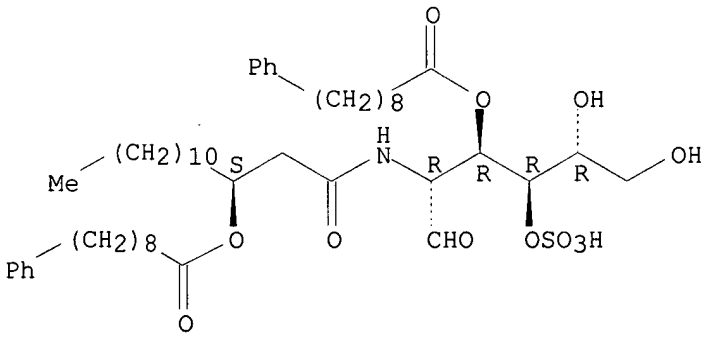
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L44 ANSWER 5 OF 8 USPATFULL on STN
AN 1999:139367 USPATFULL
TI Glucopyranose derivatives
IN Toda, Masaaki, Osaka, Japan
Sasaki, Yutaro, Osaka, Japan
Shimoji, Katsuichi, Kyoto, Japan
PA Ono Pharmaceutical Co., Ltd., Oaska, Japan (non-U.S. corporation)
PI US 36385 19991109
US 4925929 19900515 (Original) <--
AI US 1993-64549 19930520 (8) <--
US 1989-338090 19890414 (Original) <--
RLI Continuation-in-part of Ser. No. US 1986-938308, filed on 5 Dec 1986, now abandoned And Ser. No. US 1988-188873, filed on 2 May 1988, now abandoned

PRAI JP 1985-273440 19851206 <--
JP 1986-210379 19860906 <--
JP 1987-106298 19870501 <--
DT Reissue
FS Granted
EXNAM Primary Examiner: Griffin, Ronald W.; Assistant Examiner: White, Everette
LREP Sughrue, Mion, Zinn, Macpeak & Seas
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 3744
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to glucopyranose compounds of formula (I) and (IA) ##STR1## and the non-toxic salts thereof wherein the substituents are as defined herein. Such materials possess enhancing activity of cellular immunity (e.g. mitogenic activity) to living tissue and therefore are useful as anti-tumor agents.

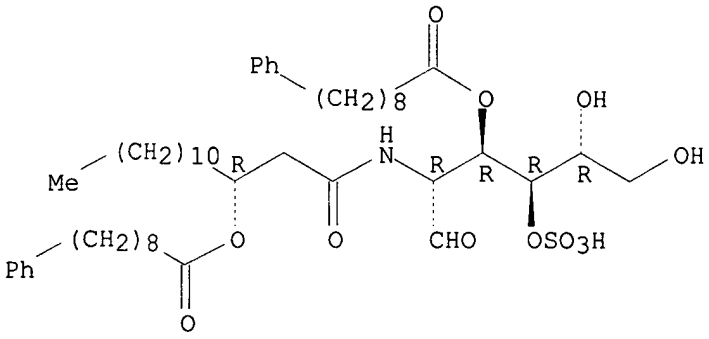
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **111250-67-0P 111250-71-6P**
(preparation of, as immunostimulant and antitumor agent)
RN 111250-67-0 USPATFULL
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 111250-71-6 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

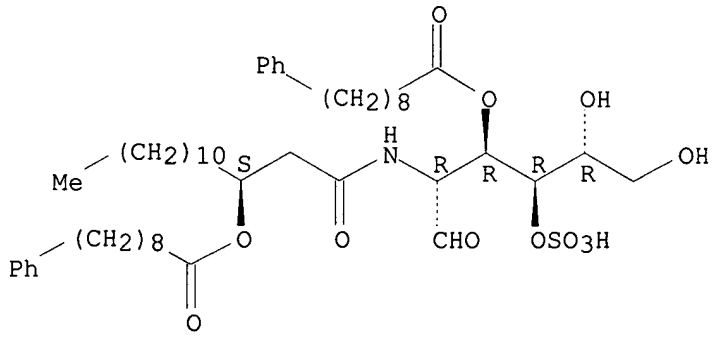


L44 ANSWER 6 OF 8 USPATFULL on STN
AN 1998:33949 USPATFULL
TI Salts of glucopyranose derivative and solutions of the same
IN Imaki, Katsuhiro, Osaka, Japan
Hashimoto, Shinsuke, Osaka, Japan
Wakatsuka, Hirohisa, Osaka, Japan
PA Ono Pharmaceutical Co., Ltd., Osaka, Japan (non-U.S. corporation)
PI US 5733927 19980331 <--
AI US 1995-465470 19950605 (8) <--
RLI Division of Ser. No. US 1994-183845, filed on 21 Jan 1994, now abandoned which is a division of Ser. No. US 1993-10163, filed on 28 Jan 1993, now patented, Pat. No. US 5294703
PRAI JP 1992-42185 19920131 <--
JP 1992-155913 19920522 <--
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Nicky
LREP Sughrue, Mion, Zinn, Macpeak & Seas, PLLC
CLMN Number of Claims: 9
ECL Exemplary Claim: 1,2
DRWN No Drawings
LN.CNT 800
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for improving the solubility of a salt of a glucopyranose derivative of formula (I) ##STR1## wherein R.sup.2, R.sup.3 and Y.sup.+ are as defined herein. The compound of formula (I) possesses enhanced activity for cellular immunity, and therefore is useful as an enhancing agent for immunity. It also possesses inducing activity for TNF, IL-1, and IFN, and therefore is useful as an anti-tumor agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **152646-92-9P 152646-93-0P**
(preparation and reaction of, in preparation of drug)
RN 152646-92-9 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium magnesium sodium salt, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



●x Ca

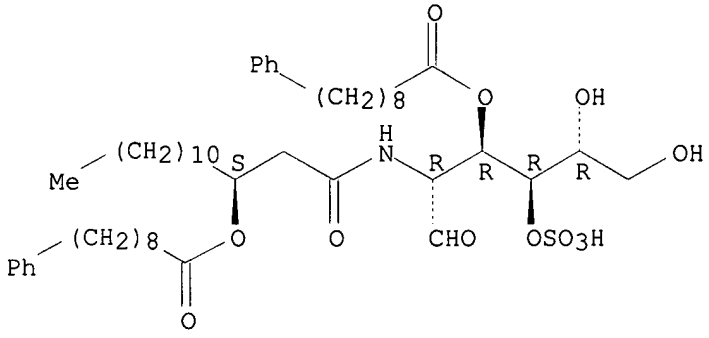
●x Mg

PAGE 2-A

●x Na

RN 152646-93-0 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium salt (2:1), (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

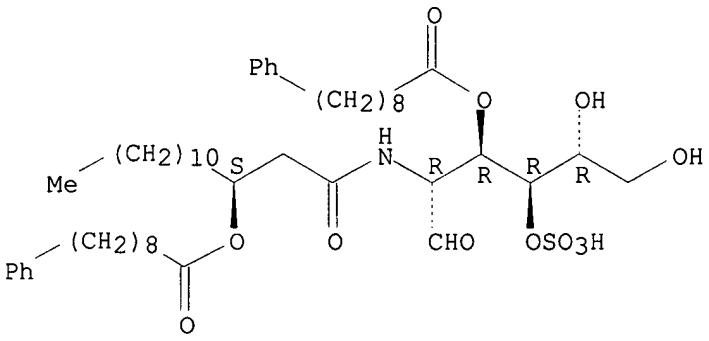


●1/2 Ca

IT **152646-95-2P 152646-96-3P**
(preparation of, as drug)

RN 152646-95-2 USPATFULL
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



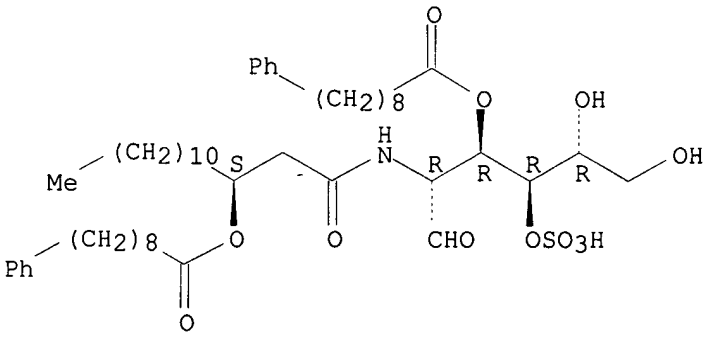
● Na

RN 152646-96-3 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (S)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (9CI) (CA INDEX NAME)

CM 1

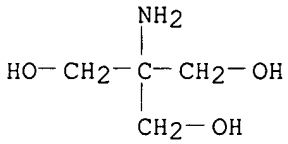
CRN 111250-67-0
CMF C50 H79 N O12 S
CDES 5:D-GLUCO-2(S)

Absolute stereochemistry.



CM 2

CRN 77-86-1
CMF C4 H11 N O3

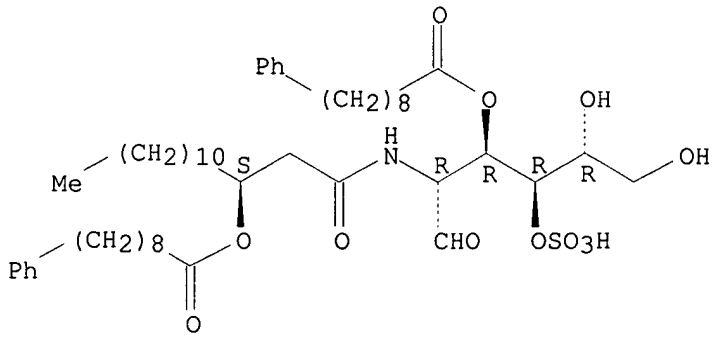


L44 ANSWER 7 OF 8 USPATFULL on STN
AN 94:22358 USPATFULL
TI Salts of glucopyranose derivatives and its intermediate
IN Imaki, Katsuhiro, Osaka, Japan
Hashimoto, Shinsuke, Osaka, Japan
Wakatsuka, Hirohisa, Osaka, Japan
PA Ono Pharmaceutical Co., Ltd., Osaka, Japan (non-U.S. corporation)
PI US 5294723 19940315 <--
AI US 1993-10163 19930128 (8) <--
PRAI JP 1992-42185 19920131 <--
JP 1992-155913 19920522 <--
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Nicky
LREP Sughrue, Mion, Zinn, Macpeak & Seas
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 760
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A salt of glucopyranose derivative of the formula (I) ##STR1## wherein R.sup.2 is ##STR2## R.sup.3 is ##STR3## Y.sup.+ is sodium ion or tris(hydroxymethyl)methylammonium ion; and a glucopyranose derivative of the formula (II) ##STR4## wherein all the symbols are the same meaning as hereinbefore defined, is an important intermediate for the preparation of compound of the formula (I).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **152646-92-9P 152646-93-0P**
(preparation and reaction of, in preparation of drug)
RN 152646-92-9 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium magnesium sodium salt, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



●x Ca

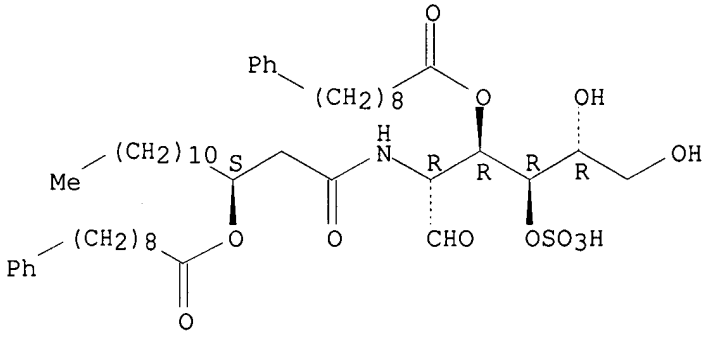
●x Mg

PAGE 2-A

●x Na

RN 152646-93-0 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), calcium salt (2:1), (S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

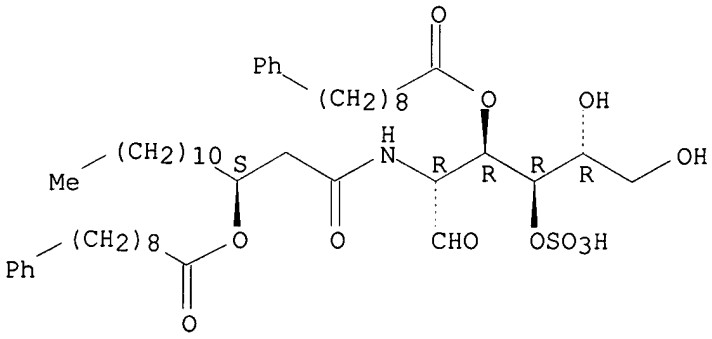


●1/2 Ca

IT **152646-95-2P 152646-96-3P**
(preparation of, as drug)

RN 152646-95-2 USPATFULL
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



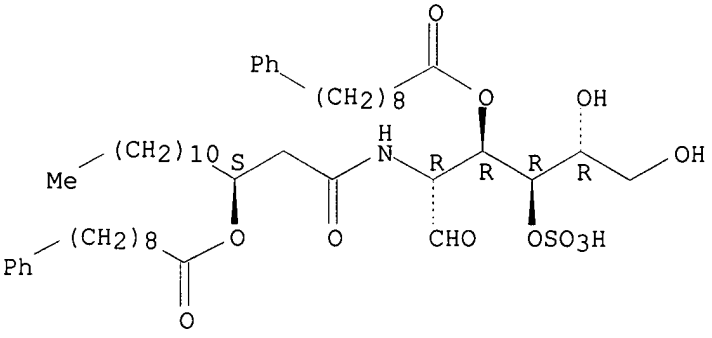
● Na

RN 152646-96-3 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (S)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (9CI) (CA INDEX NAME)

CM 1

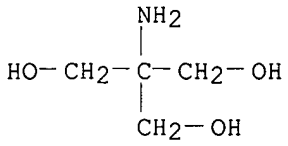
CRN 111250-67-0
CMF C50 H79 N O12 S
CDES 5:D-GLUCO-2(S)

Absolute stereochemistry.



CM 2

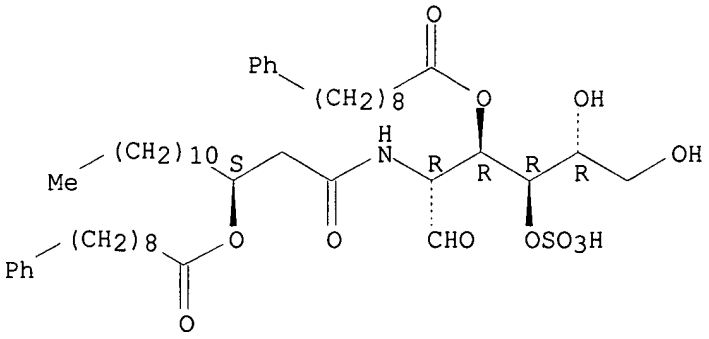
CRN 77-86-1
CMF C4 H11 N O3



L44 ANSWER 8 OF 8 USPATFULL on STN
AN 90:38502 USPATFULL
TI Glucopyranose derivatives
IN Toda, Masaaki, Osaka, Japan
Sasaki, Yutaro, Osaka, Japan
Shimoji, Katsuichi, Kyoto, Japan
PA Ono Pharmaceutical Co. Ltd., Osaka, Japan (non-U.S. corporation)
PI US 4925929 19900515 <--
AI US 1989-338090 19890414 (7) <--
RLI Continuation-in-part of Ser. No. US 1986-938308, filed on 5 Dec 1986, now abandoned And a continuation-in-part of Ser. No. US 1988-188873, filed on 2 May 1988, now abandoned
PRAI JP 1985-273440 19851206 <--
JP 1986-210379 19860906 <--
JP 1987-106298 19870501 <--
DT Utility
FS Granted
EXNAM Primary Examiner: Griffin, Ronald W.
LREP Sughrue, Mion, Zinn, Macpeak & Seas
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 3028
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to glucopyranose compounds of formula (I) and (IA) ##STR1## and the non-toxic salts thereof wherein the substituents are as defined herein. Such materials possess enhancing activity of cellular immunity (e.g. mitogenic activity) to living tissue and therefore are useful as anti-tumor agents.

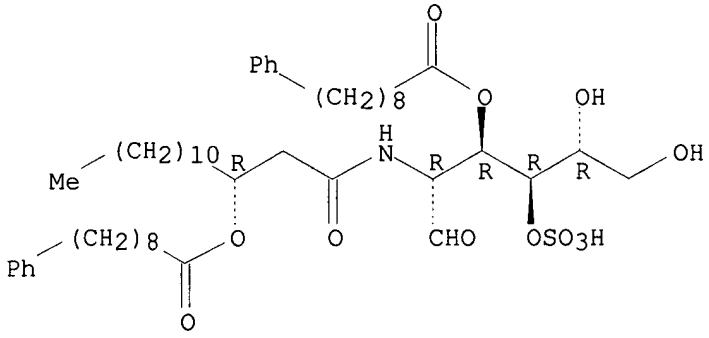
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **111250-67-0P**
(preparation of, as immunostimulant and antitumor agent)
RN 111250-67-0 USPATFULL
CN D-Glucose, 2-deoxy-2-[[(3S)-1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **111250-71-6P**
(preparation of, as immunostimulant and antitumor agent)
RN 111250-71-6 USPATFULL
CN D-Glucose, 2-deoxy-2-[[1-oxo-3-[(1-oxo-9-phenylnonyl)oxy]tetradecyl]amino]-, 3-benzenenonanoate 4-(hydrogen sulfate), (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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L13 ANSWER 1 OF 2 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2000-116716 [10] WPIX
DNC C2000-035687
TI Agents for treating HIV infection.
DC B03
IN FUKUSHIMA, D; SHIBAYAMA, S; TADA, H
PA (ONOY) ONO PHARM CO LTD
CYC 33
PI WO 9965480 A1 19991223 (200010)* JA 94 A61K031-215
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU BR CA CN HU JP KR MX NO NZ RU TR US ZA
AU 9941665 A 20000105 (200024) A61K031-215
EP 1095653 A1 20010502 (200125) EN A61K031-215
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
KR 2001052863 A 20010625 (200173) A61K031-35
EP 1095653 A9 20020403 (200223) EN A61K031-215
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
JP 2000554360 X 20021126 (200307) A61K031-215
US 2004072767 A1 20040415 (200426) A61K031-7008
ADT WO 9965480 A1 WO 1999-JP3180 19990615; AU 9941665 A AU 1999-41665 19990615; EP 1095653 A1 EP 1999-925324 19990615, WO 1999-JP3180 19990615; KR 2001052863 A KR 2000-714200 20001214; EP 1095653 A9 EP 1999-925324 19990615, WO 1999-JP3180 19990615; JP 2000554360 X WO 1999-JP3180 19990615, JP 2000-554360 19990615; US 2004072767 A1 Cont of WO 1999-JP3180 19990615, Cont of US 2000-719816 20001218, US 2003-668290 20030924
FDT AU 9941665 A Based on WO 9965480; EP 1095653 A1 Based on WO 9965480; EP 1095653 A9 Based on WO 9965480; JP 2000554360 X Based on WO 9965480
PRAI JP 1998-183276 19980616
IC ICM A61K031-215; A61K031-35; A61K031-7008
ICS A61K031-255; A61K031-351; A61K031-70; A61K031-7028; **A61P031-18**; C07C305-20; C07D309-14; C07H013-04
AB WO 9965480 A UPAB: 20000228
NOVELTY - Agents for treating or preventing HIV infection comprise a glucopyranose derivative (I).
DETAILED DESCRIPTION - Agents for treating or preventing HIV infection comprise a glucopyranose derivative of formula (I) or its salt.
X = CH2 or O;
R = H, OH or 1-4C alkoxy;
G = CH2CH(R1R2)R3R4 or YPh;
Ph = 3-OCpH2p+1, 4-OCqH2q+1-phenyl;
R1 = bond or 2-20C oxycarbonylalkylene;
R2, R4, R6 = H, OA or A;
A = 5-15C carbocyclyl optionally substituted by 1-3 1-7C alkyl, 1-7C alkoxy or halo;
R3 = 1-20C alkylene;

Y = bond or 1-4C alkylene;
p, q = 6-12;
R5 = 2-20C oxycarbonylalkylene; or R5+R6 = OCOZOPh;
Z = bond or 1-4C alkylene;
R7 = H, Me, CH2OH or CH2OSO3H;
provided that (i) when R1 = 2-20C oxycarbonylalkylene then R1 is bonded to R2 through alkyl; and (ii) R6 is bonded to R5 through alkyl.
An INDEPENDENT CLAIM is also included for compound (I) in which R2, R4, R6 = H and R7 is not H.
ACTIVITY - Anti-HIV. In an in vitro assay against HIV IIIb virus (Ia) at 10 mu g/ml reduced p24 antigen levels to less than 100 pg/ml on day 7 compared to greater than 600 pg/ml for a control.
MECHANISM OF ACTION - P24-Antagonist.
USE - For treating or preventing HIV infection (claimed) and AIDS.
ADVANTAGE - (I) have low toxicity e.g. 2-deoxy-2-(3S-(9-phenylnonanoyloxy)-tetradecanoyl)amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-D-glycopyranose (Ia) sodium salt in SD rats had a LD50 value of 60-70 mg/kg intravenously.
Dwg.0/2

FS CPI
FA AB; GI; DCN
MC CPI: B07-A02; B10-A09A; **B14-A02B1**
TECH UPTX: 20000228
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: (I) is prepared by Known methods e.g. by sulfonylation of a glycopyranose derivative.
ABEX UPTX: 20000228
SPECIFIC COMPOUNDS - The use of 1 compound is specifically claimed i.e. 2-deoxy-2-(3S-(9-phenylnonanoyloxy)-tetradecanoyl)amino-3-O-(9-phenylnonanoyl)-4-O-sulfo-D-glycopyranose (Ia) and 14 compounds are claimed e.g. 2-deoxy-2-(3R-(tetradecanoyloxy)tetradecanoyl)amino-3-O-tetradecanoyl-4-O-sulfo-D-glucopyranose (Ib).

ADMINISTRATION - Dosage is 1-1000 mg/day orally or 1-100 mg/day non-orally (preferably by intravenous infusion).
EXAMPLE - Pyridine-sulfur trioxide complex (60 mg) was added to 2-deoxy-2-((3R-(tetradecanoyloxy)tetradecanoyl)amino-3-O-tetradecanoyl-6-O-t-butyldimethylsilyl-D-glucopyranose (150 mg) in pyridine (2 ml) and the mixture was stirred at room temperature for 2 hours. Work-up by silica gel chromatography (dichloromethane/methanol = 9:1) gave 110 mg of 2-deoxy-2-((3R-(tetradecanoyloxy)tetradecanoyl)amino-3-O-tetradecanoyl-4-O-sulfo-6-O-t-butyldimethylsilyl-D-glucopyranoseas its calcium, sodium or magnesium salt. The above compound (101 mg) in tetrahydrofuran (2 ml) was reacted with acetic acid (2 ml) and water (1 ml) at 50degreesC for 20 mins. Work-up including silica gel chromatography (dichloromethane/methanol = 17/3) gave 66 mg of 2-deoxy-2-(3R-(tetradecanoyloxy)tetradecanoyl)amino-3-O-tetradecanoyl-4-O-sulfo-D-glucopyranose (Ib) as its calcium, sodium or magnesium salt.

L13 ANSWER 2 OF 2 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN **2000-096806** [08] WPIX
DNC C2000-028043
TI Immunosuppressant for treating asthma, atopic dermatitis, rhinitis, conjunctivitis, pulmonary aspergillosis, hypereosinophilia, PIE syndrome and Loeffler syndrome.
DC B03
IN OMAWARI, N; SOMA, G
PA (ONOY) ONO PHARM CO LTD
CYC 22
PI WO 9956744 A1 19991111 (200008)* JA 43 A61K031-35
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: JP KR US
EP 1088553 A1 20010404 (200120) EN A61K031-35
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
KR 2001043248 A 20010525 (200168) A61K031-35
JP 2000546770 X 20021105 (200304) A61K031-351
US 6495678 B1 20021217 (200307) A61K031-70
ADT WO 9956744 A1 WO 1999-JP2362 19990506; EP 1088553 A1 EP 1999-918318 19990506, WO 1999-JP2362 19990506; KR 2001043248 A KR 2000-712195 20001102; JP 2000546770 X WO 1999-JP2362 19990506, JP 2000-546770 19990506; US 6495678 B1 WO 1999-JP2362 19990506, US 2000-674808 20001106
FDT EP 1088553 A1 Based on WO 9956744; JP 2000546770 X Based on WO 9956744; US 6495678 B1 Based on WO 9956744
PRAI JP 1998-137402 19980506
IC ICM A61K031-35; A61K031-351; A61K031-70
ICS A61K035-56; A61P037-06; A61P037-08
ICA C07D309-10; C07H013-04; C07H015-04
ICI C07D309-10, C07H013:04, C07H015:04
AB WO 9956744 A UPAB: 20000215
NOVELTY - An immunosupppressant contains a 2-(acylated amino)-3-acyl-glucopyranose-4-sulphate derivative or its salt.

DETAILED DESCRIPTION - An immunosupppressant contains a 2-(acylated amino)-3-acyl-glucopyranose-4-sulphate derivative or its salt of formula (I).

R = H, OH or 1-4C alkoxy;
G = CH2CH(R1-R2)-R3-R4 or a group of formula (i);
Y = bond or 1-4C alkylene;
R1 = bond or 2-20C oxycarbonylalkyl;
R2 = H, or phenyl, phenoxy, naphthyl or naphthyloxy (all optionally substituted by 1-3 of 1-7C alkyl, 1-7C alkoxy or halo);
R3 = 1-20C alkylene;
R4 = phenyl, phenoxy, naphthyl or naphthyloxy (all optionally substituted by 1-3 of 1-7C alkyl, 1-7C alkoxy or halo);
R5 = 2-20C oxycarbonylalkyl;
R6 = H, or phenyl, phenoxy, naphthyl or naphthyloxy (all optionally substituted by 1-3 of 1-7C alkyl, 1-7C alkoxy or halo)
R5-R6 = a group of formula (ii);
Z' = bond or 1-4C alkylene;
R7 = H, methyl, hydroxymethyl or sulphoxymethyl;
p-s = 6-12;

provided that:

(a) R2, R4 and R6 are not all H;
(b) when R1 = 2-20C oxycarbonylalkyl, then R2 is bonded to the alkyl of R1;
(c) when R5 = 2-20C oxycarbonylalkyl, then R6 is bonded to the alkyl of R5.

ACTIVITY - Antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive

MECHANISM OF ACTION - (I) inhibit the production of immunoglobulin E (IgE) antibodies, interferon 5, interferon 4, interferon 2 and interferon gamma; and inhibit the penetration of eosinophils.

Mice were given anti-IgE antibodies (3 micro g/body) then 0.15 % 2,4-dinitrofluorobenzene (DNFB) (25 micro l) as antigen was applied to each ear. Treated animals were given sodium salt of 2-deoxy-2-(3S-(9-phenylnonanoyloxy)tetradecanoyl)amino-3-O-(9-phenylnonanoyl)-4-O-sulpho-D-glucopyranose (40 mg/kg orally) one hour before the test. Ear thickness swelling was 6.2 % for mice where vehicle only was applied; 18.7 % for untreated controls, and 10.2 % for treated mice.

USE - (I) are used to prevent and treat allergies and immune disorders (claimed), including asthma, atopic dermatitis, rhinitis, conjunctivitis, pulmonary aspergillosis, hypereosinophilia, PIE (not

defined) syndrome and Loeffler syndrome.
ADVANTAGE - Toxicity (LD50) of 2-deoxy-2-(3S-(9-phenylnonanoyloxy)tetradecanoyl)amino-3-O-(9-phenylnonanoyl)-4-O-sulpho-D-glucopyranose (IA) was 60-70 mg/kg in rats.
Dwg.0/0
FS CPI
FA AB; GI; DCN
MC CPI: B07-A02B; B10-A07; B14-A04A; B14-C03; B14-G02; B14-G02A; B14-K01; B14-K01A; B14-N03; B14-N05; B14-N17C
ABEX UPTX: 20000215
SPECIFIC COMPOUNDS - (I) is especially 2-deoxy-2-(3S-(9-phenylnonanoyloxy)tetradecanoyl)amino-3-O-(9-phenylnonanoyl)-4-O-sulpho-D-glucopyranose (IA).

ADMINISTRATION - 1-1000 mg/day orally or 1-100 mg/day by other routes.

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(FILE 'HOME' ENTERED AT 12:14:47 ON 31 JAN 2006)
SET COST OFF

FILE 'WPIX' ENTERED AT 12:15:24 ON 31 JAN 2006
L1 3 S (RA1824 OR RA181T OR RA0ZTM)/SDCN
L2 3 S (102749-1-1-0 OR 102749-1-0-0)/DCRE
L3 3 S (RA0ZTM OR RA181T)/DCN
L4 2 S ONO4007 OR ONO 4007
L5 4 S L2-L4
L6 1 S L5 AND A61P031-18/IPC
L7 1 S L5 AND (B14-A02B1 OR C14-A02B1)/MC
L8 1 S P210/M0,M1,M2,M3,M4,M5,M6 AND L5
L9 1 S L5 AND A61P031/IPC
L10 1 S L6-L9
L11 3 S L5 NOT L10
L12 1 S L11 AND 2000-096806/AN
L13 2 S L10,L12

FILE 'WPIX' ENTERED AT 12:20:52 ON 31 JAN 2006

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